Reflective Learning and Reflexive Modernity as Theory Practice and Research in Post-Compulsory Education

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Abstract

Does reflective learning in education meet the needs of learners if we live in a reflexive modern society? This is the central research question. The thesis constructs a late-modern case for reflective learning in post-compulsory education. It is argued that reflective learning connects with a key concept in contemporary social theory - that of reflexivity. The arguments are developed through the following key questions.

- Does reflective learning in post compulsory education correspond with the needs of learners in late-modernity?
- What are the characteristics of late-modernity?
- Can the application of reflective learning by practitioners improve student learning in post-compulsory education?
- What are the conclusions for teaching and learning in post-compulsory education that flow from this analysis of social theory and educational practice?

Enlightenment and contemporary modernity is explored through a review of literature on social theory and philosophy. The second part of the thesis is concerned with praxis the testing of theory in action. Case studies in action research are used to examine how teachers seek to promote reflective learning in their practice. This exploration of theory and practice is then used to present the overall conclusions and make recommendations for future action. In many ways this thesis revisits the territory and thinking of John Dewey, it seeks to connect educational praxis to the wider social context, but from a late-modern perspective.
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Introduction: Key Themes and Ethos

But theory must be tested in practice ... Hence we ought to examine what has been said by applying it to what we do and how we live; and if it harmonizes with what we do, we should accept it, but if it conflicts we should count it [mere] words. (Aristotle NE:1179a20)

The above quote captures an underlying theme of this thesis. That is to connect theory to practice. In Nicomachean Ethics Aristotle placed an emphasis on praxis; he argued "thought by itself, however, moves nothing; what moves us is thought aiming at some goal and concerned with action." (Irwin 1985:150). In the strictest sense Aristotle's use of the term praxis referred to rational action based on a decision. Aristotle would also appear to be an early advocate of another theme in this thesis that of reflective learning; if praxis referred to rational action based on a decision, a decision was said to require deliberation. Aristotle asked "what sort of thing is decision?" he answered "Then perhaps what is decided is the result of prior deliberation. For decision involves reason and thought," (Irwin 1985:61). The emphasis that Aristotle gave to action and the need to put theory into practice, has parallels with Karl Marx's use of the term praxis. Marx argued that objective truth could not be attributed solely to human thinking; he argued that man must prove the truth in practice. In the "Thesis on Feuerbach" (Marx 1845) provided a succinct account of his materialist perspective and orientation to action. The Feuerbach thesis argued that social life is essentially practical, that if theory is to escape mysticism it must find its solution in human practice and the understanding of this practice.

This research uses the concept of praxis in seeking to establish a nexus between two parallel academic traditions. The thesis attempts to provide a social theory of teaching and learning; it seeks to link theories of modernity to educational practice. It asks what form of education is required that will meet the needs and expectations of students in a late-modern age. The thesis aims to demonstrate how social theory connects to educational practice; it presents an argument that modernity, the social context, has changed and
this in turn requires changes to teaching and learning in post compulsory education.

The overall research question is “does reflective learning in education meet the needs of learners if we live in a reflexive modern society?” This theme is explored through the following questions:

1. Does reflective learning in post-compulsory education correspond with the needs of learners in contemporary modernity?

2. What are the characteristics of contemporary modernity?

3. Can the application of reflective learning, by practitioners, improve student learning in post-compulsory education?

4. What are the conclusions for teaching and learning in post-compulsory education that flow from this analysis of social theory and educational practice?

In order to explore such questions a detailed exploration of modernity past and present is required. Social theory and philosophy are academic traditions that underpin the thesis; with particular emphasis given to contemporary social commentary on the changing nature of modernity. The first two questions are essentially theoretical and exploratory; the third question involves the testing out of ideas in practice; the fourth question concerns the development of theory and ideas for future action.

Another philosophical influence on the thesis is the pragmatism of John Dewey which echoes the praxis evident in Aristotle and Marx. John Dewey questioned the philosophical preoccupation with a search for absolute truth and certainty that exists before us in some forms a priori. This, he argued, had produced conservative philosophy concerned with the past rather than a better future. Rorty (1999:29) argued that like Marx, Dewey advocated making philosophy an instrument of change. Knowledge for Dewey should serve our practical judgements, it should provide understanding that enables people to deal with problems as they arise. In “Democracy and Education”
(1916) Dewey advocated experiential learning that nurtured reflection on experience and the systematic testing of ideas. The approach could be seen as positivist, and like Marx endorsed scientific method. However, Dewey's view of science is perhaps different from the Enlightenment values evident in Marx. Dewey did not share the confidence in science as capable of establishing universal law. Dewey argued that in this respect the science of Marx was dated:

For just as necessity and search for a single all comprehensive law was typical of the intellectual atmosphere of the forties of the last century, so probability and pluralism are the characteristics of the present state of science. (Rorty 1999:31)

The above quotation demonstrates that Dewey's insight and understanding of Enlightenment thinking is similar to that of contemporary critics of Enlightenment philosophy. Dewey's approach to knowledge suggests that certainty is unlikely. It is in this respect that there are parallels between Dewey and contemporary commentators on modernity.

With the qualifications about Dewey, the above authors reveal a positivist orientation to research that favours adaptations of scientific modes of inquiry. This practical and pragmatic orientation to knowledge has since moved a long way from positivistic traditions evident in Aristotle, Marx and Dewey. The post-modernist Lyotard has dismissed scientific enquiry as grand-narrative but would appear to endorse knowledge, scientific or otherwise, that is legitimised by its performability in the social system (Jarvis 1997:72). The bench mark of performability raises other questions such as performable for whom? However, it illustrates a contemporary return to pragmatism and theory derived from and for action. In later writing Lyotard would appear to have stepped back from his earlier dismissal of science and accept science as a source of information that enables people to make more knowledgeable decisions (Smart 1999). Facilitating reflection and examination of experience in educational practice, with a view to making more knowledgeable decisions, is an aim of this research.
There are two parallel themes in this research. Firstly an exploration of philosophical, social and educational theory that will form the basis of chapters one to four. Theme two is concerned with connecting theory to practice exploring examples of educational practice that aim to improve student learning by using models of reflective learning. Chapters five to eight, are focused on the theme of praxis. The final chapters present reflections and conclusion; all the research questions are reconsidered in the light of the theoretical exploration provided in earlier chapters. In order to provide a context and introduction to the thesis the dominant themes and influences are discussed below.

Theme One: Social Theory

There is a seam of contemporary sociological thought that defines our times in terms of the concept of reflexivity. The conceptualisation of reflexivity has been represented in a variety of guises and utilised by protagonists on different sides of the debate. In the late 1990s sociological analysis would appear to have struck a chord; as we moved through health scares related to beef and genetically modified foods or fears about millennium bugs, the conceptualisation of 'Risk Society' (Beck 1992) seemed to chime with experience. Unusually the work of sociologists, or at least Anthony Giddens, permeated the articulations of those in power. The current endorsement of lifelong learning needs to be understood as a response to the late-modern condition (Dyke 2000). Our times have been characterised as a period of rapid and wide-ranging change, a period where people are forced to reflect on new information and perhaps reassess their taken for granted knowledge and experience of the world. Past experience, custom and practice are less reliable as sources of guidance and decision making. Education has a key role in enabling people to navigate new routes through a modernity where what may have seemed universal, regulated and secure appears more complex, diverse and uncertain. Theorists have described these changes as late-modern (Giddens 1998a), reflexive modern (Beck 1992), post-modern (Bauman 1997) and neo-modern (Szerzynski 1996). Whichever variety of
prefixed modernity used, all these authors recognised the uniqueness of our times.

The ‘modern’ can be said to have originated in ideas of the eighteenth century Enlightenment (Hall 1992). Reason, science, empiricism and universal understanding provided the foundations that defined the modern world. The Enlightenment philosophies placed a tremendous confidence in the human progress being gained through science. The more reflexive late-modern critics would seem to have replaced this faith and confidence in science with scepticism and doubt (Bauman 1993:201). In place of a belief in universal law and understanding, there is a late-modern awareness of the complexity of the natural world, the unforeseen consequences of human action and risk. Modernity or the ‘progress guided society’ (Bauman 1995:21) has been recast as the ‘Risk Society’ of Ulrich Beck (1992).

Another element to the late-modern perspective, is the information society discourse, where abundant and rapidly changing information is mediated through extensive communication technologies (Castells 1996). Anthony Giddens acknowledges the importance of information in guiding decision making and reflection:

Reflexivity has two senses, one very general, and the other more directly relevant to modern social life. All human beings are reflective in the sense in which thinking about what one does is part of doing it ... Social reflexivity refers to a world increasingly constituted by information rather than pre-given modes of conduct. It is how we live after the retreat of tradition and nature, because we have to take so many forward orientated decisions. In that sense, we live in a much more reflexive way than previous generations have done. (Giddens 1998b:15).

Continuous reassessment of experience, and information as part of experience, is therefore central to living with the rapid change of late-modernity. Earlier forms of modernity could more frequently use custom and tradition to guide action. In economic terms capital needs to adapt to the rapid pace of change by using labour that is more reflective, creative, innovative and autonomous. These labour skills had become necessary to
profit making in high skills sectors of the economy and have policy implications for vocational education and training.

**Theme Two: Teaching and Learning**

The second academic theme within the thesis is that of reflective learning. It is argued that in a late-modern age of reflexivity, reflective learning needs to be at the heart of developments in teaching and learning and educational policy development. The thesis aims to evaluate some of the theoretical and practical implications of reflexivity and reflective learning, to connect macro sociological theory with micro educational practice. In addition to providing case studies in praxis an aim is to demonstrate a connection between learning and modernity itself, to link educational practice to social theory. In a sense the thesis represents an attempt to provide a social theory of teaching and learning.

As a social science teacher involved in teacher education the concept of reflective learning has successfully informed my own practice and development, and that of my students. My experience as a teacher using and adapting educational theory in my practice provided the foundations for this exploration of reflexive education. Graham Gibbs' practical application and development of the Lewinian learning cycle in "Learning by Doing" (Gibbs 1987) has been influential. The approach is quickly assimilated by teachers and has provided the spark for a rich stream of ideas and innovations aimed at improving student learning in post-compulsory education. A typical response from practitioners is recognition that they use theory, practice and experience in their teaching; it is facilitating reflection that is most frequently cited as a possible area for improvement in their practice. The small scale case studies in action research presented in chapter eight illustrate some of the reflective learning innovations in teaching and learning that have derived from my own practice and research in teacher education.

A similar emphasis to improving student learning can be found in Higher Education innovations such as those recorded in "The Improving Student
In this text Gibbs had shifted his emphasis to approaches to study and the nurturing of a deep approach to study where:

The student attempts to make sense of what is to be learnt, which consists of ideas and concepts. This involves thinking, seeking integration between components and between tasks and ‘playing’ with ideas. (Gibbs 1992:2)

As demonstrated in part two there are strong parallels between the reflective learning discourse and approaches to study literature. It is suggested here that reflective practice produces a meaning orientation or deep approach to study.

Reflective learning theory as presented by Kolb and the practice application advocated by Gibbs, provided the stimulus for innovations derived from my own practice that improved student learning. Reflection on this account of a learning cycle with other practitioners revealed some reservations about the model. The Kolb model did not always correspond with individual experiences of successful learning. The four dimensions of observation and reflection, abstract generalisation, experimentation and concrete experience were generally accepted. The order and flow of the cycle were questioned. The analogy of the four dimensions representing critical contact points within a sparking chamber of learning was a popular suggestion as a variation on the Kolb model. In another favoured variant classes would simply have arrows between the four dimensions flowing in both directions. Similar reflections and adaptations emerged when other practitioners were introduced to the Kolb model, this suggested the model required theoretical adaptation.

Jarvis (1987) provided another influential account of reflective learning where practitioners were asked to record an experience of learning, share these experiences with others then - following consideration of Kolb (1984) - adapt the Learning Cycle so that it better reflected their experiences of learning. Following such dialogue and consultation with several hundred practitioners, an alternative model of the learning process was developed. The model of the learning process developed by Jarvis closely mirrored the accounts and
modifications that had emerged in my own teaching and learning with practitioners. The model allows for different pathways to reflective learning. It acknowledges that an outcome of learning can be change or reinforcement and it provides for a more sophisticated analysis of experience. The Jarvis model was developed from grounded research it matched my own experience and was recognised as valuable in teaching and dialogue with other practitioners. The model appeared to provide theory that worked in practice. It seemed to inform, shape and improve good practice in teaching and learning. The case studies in chapter eight attempt to demonstrate how reflective learning, informed by the Jarvis model, improved student learning. A more detailed analysis of the learning theory itself is provided in chapter four.

As will be demonstrated in part one the language of reflexivity has a strong resonance with that of reflectivity in learning (Jarvis 1992 Kolb 1984, Schon 1987). Indeed when interviewed, Giddens quite explicitly defined the concept of reflexivity in terms of reflection (Chignall 1995). In education what Giddens refers to as the “reflexive monitoring of action” (Chignall 1995:11) is referred to as a “basis for reflective learning” (Jarvis 1992:37). Lash and Urry also refer to the critical reflection of individuals in their account of reflexivity (1994:32). Reflexivity and reflection are therefore at the heart of the theoretical approaches that described new forms of modernity (Beck 1992, Giddens 1991, Lash and Urry 1994). Reflexivity and scepticism provided a late twentieth century critique of the Enlightenment and presented an agenda for change. These ideas are not necessarily new, indeed a close reading of the Enlightenment (particularly David Hume) suggests they were acknowledged then. However, the ideas seem more pertinent, more powerful as explanations of contemporary experience. As a discourse the late-modern critique may be capturing hegemony. It is the discourse that provided the theoretical background for the following exploration of reflexive modernity and reflective learning.
The Importance of Social Context

The thesis explores the relationship between education and the wider social philosophical context. This is a recurring theme in the history and philosophy of education. It can be traced back to Plato. In “The Republic” he suggested the role of education was the production of a just and good society. Though for him the good society had limited democracy, he believed the power elite held the wisdom to judge what constitutes a just society (Lee 1987). Many of the themes discussed by Plato have recurred throughout the history of education. The belief that education is powerful enough in itself to change society is one recurring theme in educational thinking. The subordination of the individual to notions of a collective good provides another example. This view was allied to a subject-centred rather than person centred orthodoxy; one that believed knowledge to be fixed, to exist before us rather than being discovered through experience. In Plato knowledge is said to exist in the soul before birth, in life it is simply recalled. Bertrand Russell illustrates this with reference to the *Meno* where Socrates says, “there is no teaching, but only recollection” (Russell 1946:153). O’Hear argued (1995:214) that from Plato and on through the work of St Augustine, a didactic view of education predominated where education was viewed primarily as the transmission of truths. The dominance of a view of education as essentially transmission of what is believed to be true, a jug and mug principle, continued until the Enlightenment. This was to change in the seventeenth century when Francis Bacon, recommended a form of education where learning comes from individuals making their observations and discoveries (Bacon 1605). The emphasis on learning through doing and discovery, evident in the utilitarian science orientated work of Bacon, was also celebrated by Rousseau. What is more, both of these divergent traditions shared a view of education with Plato’s radically different seam of thought, that is, they all connect education to the wider social context; an instrument for producing a version of the social good. The same theme, though more derivative of Francis Bacon than Rousseau, is central to the philosophy of John Dewey most notably in “Education and Democracy” (1916) where he argued:
... the philosophy stated in this book connects the growth of democracy with the development of experimental method in sciences, evolutionary ideas in the biological sciences, and the industrial reorganisation, and is concerned to point out the changes in the subject matter and method of education indicated by these developments (Dewey 1916:Preface)

The examination of the nature of the social world and discussion of the implications for education is a central theme in this thesis. In many ways it revisits the territory marked out by Dewey. It examines reflective learning in education and connects it to modernity. With the benefit of hindsight it will be argued that contemporary modernity is very different from that recognised by Dewey. The period of history since Dewey’s “Education and Democracy” (1916) had been pithily described by Hobsbawn as the “Age of Extremes” (1994). The Holocaust itself has been directly linked to Enlightenment modernity and a technical rationality devoid of ethics (Bauman 1993). It could be said that this age of extremes prompted what Smart calls an “archaeology of modernity” (Turner 1996:400); varieties of post-modernism that are critical of the Enlightenment foundations for much modern thinking. The account presented here acknowledges the Enlightenment critique; it is closer to a late-modern or reflexive modern rather than post-modern position in providing a theoretical foundation that connects the wider social and economic context to post-compulsory education.

The information revolution is an important marker of the changes recorded by social theorists (Kumar 1995). As stated above, vast amounts of new and often contradictory information force people to reflect on experience and make decisions. Changing information can present a challenge to the very ontological security provided by everyday living. Daily routines as fundamental as diet become subject to review, as media account of food crises compel people to think again about their actions and accept or reject a need for change. Giddens described this process as a ‘reflexive monitoring of the self’(1991:244). People have become expert in assessing the work of medical specialists and change their lifestyle accordingly. Beck also acknowledges that reflection may be a consequence of reflexive modernisation which:
necessitates self-reflection on the foundations of social cohesion and the examination of prevailing conventions and formations of rationality. (1994:8)

It is with this reflexivity that the wider social theories connect with education. The socio-economic changes will require “permanent creativity in education” (Forrester 1995:150). It has been argued that the form of education in reflexive modernisation or a risk society is best expressed in reflective approaches to learning (Jansen and Van der Veen 1992. Dyke 1997). It is perhaps reflective learning that can facilitate the need to turn the information revolution into a knowledge revolution. As Diane Lauderillard argued “knowledge is information already transformed: selected, analysed, interpreted, integrated, articulated, tested evaluated.” (1993:123). A view that corresponds with the emphasis on learning as the transformation of experience articulated by reflective learning theorists (Jarvis 1995).

If contemporary modernity provides a catalyst for reflection on rapidly changing information, reflective learning in education may therefore be a key to transforming that information into knowledge that can be acted upon. The thesis seeks to provide a theoretical case for reflective learning and explore ways in which reflective learning can improve student learning in post-compulsory education. Strategies for facilitating reflective learning are put into practice and the outcomes evaluated through research. In one sense the approach utilises what Usher and Bryant refer to as the “captive triangle” (1989). Full consideration is given to the triad of theory, practice and research. The thesis also seeks to build on the triangle presented by Usher and Bryant to stress the importance of the social philosophical context. In a world of rapid change and reflexivity the specific context, of time and space for example, takes on much more importance. The triangle cannot simply be ‘captive’ as Usher and Bryant (1989) note, but must be adaptable to a diverse and changing context. The pace of change in contemporary modernity can create disjuncture between past and present experience; such disjuncture, as Peter Jarvis argues (1992:209-13), can fuel the fire of learning.
Outline of Thesis

Part one of the thesis presents reflection on social theory and context. It will examine the philosophies that chart social, economic, environmental and educational change. It will examine and review the idea of reflective learning and connect this to the concept of reflexivity in social theory. Part one provides analysis of modernity and with reference to Enlightenment and post-Enlightenment thinking presents a case for reflective learning in post-compulsory education.

Chapter one explores the social philosophy of modernity; it provides an analysis of the Enlightenment thinking that ushered in modernity and paved the way for the contemporary critique. An exploration of the Enlightenment is essential to the development of understanding of contemporary social theory. It is argued that many of the themes evident in the contemporary critique of Enlightenment modernity were evident in the Enlightenment itself, an argument that lends support to a late-modern rather than post-modern account of our contemporary experience and thereby provides part of the rationale for the adoption of a late-modern perspective in this thesis. Chapter one seeks to explore and define modernity, to provide a canvas for the development of late-modern educational analysis.

Chapter two considers the current developments in social theory, the varieties of prefixed modernity; neo-modern, late-modern and post-modern. It will examine educational, sociological, economic and ecological accounts of reflexivity, all of which share a view critical of earlier representations of modernity. The first two chapters provide a rationale for the overarching theoretical position or paradigm adopted in this thesis. Chapter three asks; what form of post-compulsory education is appropriate in the current epoch? It suggests that reflective learning can provide a more reflexive form of education for a late-modern age. Chapter four discusses reflective learning as educational theory; it reviews and evaluates different theoretical approaches and demonstrates why Jarvis’s model (1987) was used as a basis for the action research.
The focus in part two of the thesis is on practice and research; it considers theory enacted and theory as experienced. It primarily consists of case studies in action research in post-compulsory education. Chapter five discusses the approach to research and issues related to reflexive social research in late-modernity. Chapter six considers research strategies for case studies in action research. Chapter seven provides the research design or facilitative framework for the action research; a research framework that provided a springboard for action research, rather than rigid experimental controls. Chapter eight presents the findings from case studies across the post-compulsory education sector.

The last two chapters provide the final reflection, analysis and evaluation. They attempt to provide an understanding of reflective learning in terms of theory, practice and research in context. Analysis of the overall findings from the action research case studies will form chapter nine. The focus in chapter nine is on how participants put reflective learning into practice and how this was experienced by themselves and their students. The final chapter reasserts the late or reflexive modern paradigm in preference to certain varieties of the post-modern. In terms of practice in post-compulsory education recommendations for improving student learning through reflective learning will be made along with ideas for future research. The final chapters also offer a tentative modification or change of emphasis in reflective learning theory. It recommends that models of learning should be open not 'captive'. Reflective learning needs to be open and responsive to the experience of others, not simply with the primary experience of the self. In a world that is rich in diversity, rapidly changing and full of unforeseen risks, reflective learning that provides an awareness and concern for the other is a key dimension of a more reflexive form of education, one that may facilitate a process of democratisation in late-modernity. Diagram 1 below provides a flow diagram of the thesis.
Flow Diagram of Thesis

Title
Reflective Learning and Reflexive Modernity as theory practice and research

Part One
Theory and Context
Philosophical Social
and Historical Context
Social Context
Reflective Learning as Reflexive Education
Reflective Learning Theory

Part Two
Praxis and Case Study
Research Approach
Research Strategies
Research Design and Facilitative Framework
Case Studies in Action Research

Part Three Reflections and Conclusions
Reflections on Praxis
Reflections and Conclusions

Diagram I
Chapter One: The Makings Of Modernity A Philosophical Context For Reflective Learning

As indicated in the introduction, this thesis attempts to examine the relationship between education and the wider social philosophical context; to connect the form and processes of education to the development of modernity. Accounts of contemporary modernity tend to contain assumptions about the modern these can be located in the philosophies of the Enlightenment. This chapter defines modernity in terms of the post-Renaissance Enlightenment and explores themes that have been used to define these eighteenth century philosophies. In defining the modern, the chapter sets the scene for later discussion of reflexivity and late-modernity. It is argued that many contemporary ideas can be found within the Enlightenment itself. Reflection and reflexivity not only provide an agenda for learning in contemporary society they have been evident since the makings of modernity.

In the “Advancement of Learning” (Bacon 1605) Francis Bacon extended his ideas about the process of scientific research to more general educational themes. There is an early connection here between the process of experiential learning and the conduct of research that has recently been developed in educational literature (Jarvis 1999) and one that links to reflexive forms of educational practice advocated in this thesis. Bacon’s enthusiasm for tried and tested practical knowledge that could be used to improve the experience of humanity is pragmatist. It could also be seen as utilitarian and an example of praxis “theoretically informed practical activity” (Porter 1990:7). Francis Bacon, as a writer from the Renaissance, nurtured ideas that were developed more successfully and became more influential during the Enlightenment.

There are seams of critical sociological enquiry that define themselves with reference to the modern. Some varieties of this enquiry view the modern or modernity as a closed chapter; a period of ideas from which we have moved
on, perhaps become post-modern. Others have developed theoretical frameworks based on the acknowledgement that the condition of modernity has changed; that our contemporary culture needs to be redefined. Differing interpretations of the consequences of modernity carry different labels such as post-traditional, late-modern or reflexive modern. Yet others, of which Jurgen Habermas is most notable, argue that modernity is alive and well and remains a valuable and unfinished project. Before examining these competing perspectives and interpretations of our times it is necessary to examine the ideas that have helped define modernity; that is to consider the key philosophical themes of the eighteenth century Enlightenment.

The Enlightenment as the Age of Reason is frequently cited as the defining moment of modernity. Early enthusiasts of the Enlightenment paint a picture of humanity as if it had just emerged from Plato’s cave. “For Kant, Enlightenment was man’s final coming of age, the emancipation of human consciousness from an immature state of ignorance and error.” (Porter 1990:1). There was a confidence that the Enlightenment principles would provide a key to the advancement of knowledge and universal understanding. If one followed Kant’s advice and “dared to know” (Gay 1977:1), one would have a key to progress. The Enlightenment is usually located in the eighteenth century (Porter 1990); some talk of an early Enlightenment (Okensberg-Rorty 1998:2) which encompasses the seventeenth century and thereby extends back to Descartes. It is perhaps more accurate to define modernity as post-Renaissance. A difficulty in locating and identifying key ideas with a particular time and place is that similar ideas can be found to have been expressed before elsewhere. Equally problematic is that leading thinkers of the same time and place may have actively challenged key Enlightenment ideas.

This chapter will attempt to map a path that touches a number of key Enlightenment ideas that connect with more general theories of learning. Many of the modernity themes outlined below were arguably tenets of pre-modern philosophy. For example, the work of Locke placed an emphasis on empiricism, that information should be gained from the senses. As
mentioned in the introduction, this empirical bias can also be found in Aristotle (Irwin 1985:290). There are other examples of earlier philosophy sowing seeds of the Enlightenment. The theme that ideas should be tested by scientific and experimental methods was also evident in writers of the sixteenth century Renaissance. A kernel of Enlightenment thinking can be found in Bacon's ideas in the “Advancement of Learning” (1605). Bacon, attributed as the author of the phrase “knowledge is power” (Russell 1961:527), argued that knowledge was acquired through scientific enquiry. Bacon advocated a method of induction that placed an importance on finding negative instances as a means of eliminating false propositions. In this he can be seen to have established a theme later explored by the Enlightenment writings of David Hume and in more recent times, firmly established as the falsification principle, in the work of Karl Popper.

Many of the Enlightenment themes that will be explored below coincide with ideas that can be found in the “Advancement of Learning” (Bacon 1605). There was a clear scientific orientation in the philosophy of Bacon. This emphasis on systematic enquiry and testing of ideas in experience, on knowledge being verified by sensory information and empirical facts anticipated a key Enlightenment theme, that of empiricism. Although perhaps Bacon’s empiricism and his rejection of reason should not be overstated, in the Advancement of Learning he also wrote “They are ill discoveries that think there is no land, when they can see nothing but sea.” (Bacon1605:94). Francis Bacon encouraged scientists to concentrate their efforts on investigations that can be reproduced and provided for practical knowledge; his approach to research was essentially pragmatic.

It is interesting to note that a pioneer of scientific inquiry, and one who was to be so influential in Enlightenment thinking, advocated a form of scientific pragmatism. A recent response to the critique of Enlightenment modernity has also ended in a call for pragmatism; Richard Rorty (1999) returns to the pragmatism of John Dewey as a philosophical approach suited to an age of uncertainty and a pluralism of knowledge claims. For Rorty, pragmatism offers a way in which people can engage with their environment and seek
ways in which they can improve the quality of life within it. It is an action-orientated mode of operation that avoids the stasis that Habermas (1987) feared in his charge that post-modernism is a pathway to neo-conservatism. Paradoxically, contemporary critical theorists share their enthusiasm for a pragmatic engagement with the world, as a means of improving it, with Francis Bacon a patron saint of the Enlightenment.

Ideas associated with the Enlightenment are, as illustrated above, to be found in other philosophical writings of different times and places. To describe the Enlightenment simply as the ‘Age of Reason’ is therefore misleading; it does not do justice to earlier philosophical writing. It is perhaps helpful to recognise modernity as a coalescence of particular streams of thought into a more influential philosophy, a new hegemony that flowed from the fifteenth and sixteenth century Renaissance through to the seventeenth and eighteenth century Enlightenment. The dominance of the Enlightenment ideology defined what became known as modernity. As Stuart Hall argued “This movement gave definition to the very idea of modernity and is often described as the original matrix of the modern social sciences.” (1992:2).

**Enlightenment Themes**

What, then, are the key themes of Enlightenment thought? In the ‘Heavenly City of the Eighteenth Century Philosophers’ Carl Becker suggests that:

> in the eighteenth century the words without which no enlightened person could reach a restful conclusion were nature, natural law, first cause, reason, sentiment, humanity, perfectibility (these last three being necessary only for the more tender minded, perhaps). (Becker 1932:47).

Peter Hamilton provides a concise summary of the hegemonic paradigm that made up the ideas associated with the Enlightenment. This summary draws heavily on Peter Gay’s (1969, 1977) magnum opus on the Enlightenment and is quoted here as a springboard from which to explore the key ideas of modernity. It is argued here that Hamilton omits education as a central theme, the key Enlightenment ideas identified by him include:
This chapter will use the first five of the above headings as a framework to discuss and define the Enlightenment; the themes will be explored in that sequence. The other themes are subsumed within these five headings. The chapter therefore considers the Enlightenment in terms of: reason, empiricism, science, universalism, toleration and education. The last heading, education, is added as an Enlightenment theme not acknowledged by Hamilton (1992), but I will argue it to be a central theme running through the Enlightenment philosophy. The placement of key thinkers within these categories is somewhat arbitrary, as most could arguably be discussed under different headings. There is a rough chronology to the discussion below, which is more accurately described as post- Renaissance. Descartes is considered first under the theme of reason; Locke and Hume explored next within the theme of empiricism; Newton and Voltaire connect to science; Kant is discussed in terms of universalism. The categories themselves are used as a simplified, possibly hegemonic, framework of the Enlightenment discourse.

**Reason**

In his account of the spirit of the Enlightenment age Peter Gay (1969) argued that reason replaced superstition and pseudo-science. Gay illustrated this with the eighteenth century, example of people's abandonment of their faith in the healing powers of the royal touch. In the eighteenth century, reason became a powerful word of praise, a challenge to the sacred. The word was
not always used in the philosophical sense, but was also associated with more liberal and humane traditions.

The prosperity of reason in the eighteenth century was less the triumph of rationalism than of reasonableness. Reason and humanity were easily confounded, and an instance of one was often taken as an instance of the other. (Gay 1969:29)

Reason, then, was also wrapped up with notions about the progress of the plight of humanity and concern for the persecuted and the poor. The humanitarian aspirations of the Enlightenment were ambivalent. As Gay argues, "men who piously lamented the lot of slaves abroad coolly sent children down the mines at home" (Gay 1969:31). Despite this cautionary note, Gay on balance paints a humanitarian picture of the Enlightenment with ideas of progress and human improvement at the fore. Knowledge was seen as a key to progress and humanitarianism to the extent that: "Even the labouring poor came to be regarded as human beings with real feelings and a right to subsistence" (Gay 1969:39). The humanitarianism evident in the Enlightenment is perhaps not fully acknowledged by critics of modernity. In some contemporary accounts of modernity there is a tendency to emphasise the de-humanising consequences of grand-narratives (Smart 1996:406) which developed from Enlightenment values of universalism, rationality and the inevitable march of scientific progress.

A theme closely allied to reason would appear to be the rejection of past authority. Clear independent thinking or meditation was seen as a route to learning from first hand experience. Bacon cautioned against deference to any received wisdom and wrote:

> what happiness it would be to throw myself into the river Lethe, to erase completely from my soul the memory of all knowledge, all art, all poetry; what happiness it would be to reach the opposite shore naked like the first man. (Honderich 1995:214).
In the “Advancement of Learning” (1605) Bacon identified the sources of poor thinking, barriers to learning that he refers to as ‘idols’. He was particularly scathing about the “Idols of the theatre that are those to do with received systems of thought” (Russell 1961:528). The rejection of received wisdom or authority is also a starting point for Descartes; disillusioned with his schooling he aimed to gain experience. This in turn led him towards the contemplation and the meditations:

I was brought up from childhood on letters, and, because I had been led to believe that by this means one could acquire clear and positive knowledge of everything useful in life, I was extremely anxious to learn them. But, as soon as I had completed this whole course of study ... I completely changed my opinion. For I was assailed by so many doubts and errors that the only profit I appeared to have drawn from trying to become educated, was progressively to have discovered my ignorance. (Descartes 1637:29)

This is why, as soon as I reached an age which allowed me to emerge from the tutelage of my teachers, I abandoned the study of letters altogether, and resolving to study no other science than that which I could find within myself or else in the great book of the world, ...
(Descartes 1637:33)

For Descartes the highest form of wisdom did not derive from the senses, discourse or authors of learned text but through meditation. “This consists in the search for the first causes and the true principles which enable us to deduce the reasons for everything we are capable of knowing ... I am not sure, however that there has been anyone up to now who has succeeded in this project” (Garber 1998:134).

The rejection of past authority and information available to us through the senses went to the heart of Descartes’ ideas. It is here that Descartes differs from the later empiricist traditions of the Enlightenment. He did not believe in the Aristotelian teaching that “credence must be given to the direct evidence of the senses more than to theories” (Urmson and Ree 1989:28). As a lens for knowledge Descartes did not trust the senses; his example of
dreaming is often used to illustrate his scepticism about the value of sensory information. When people dream they do not always know they are dreaming; they can therefore have experiences and make a claim to knowledge based on sensory experience. To take the point further how can somebody be sure they are not dreaming or hallucinating, that their senses are providing a sound basis for knowledge? Descartes' aim was to find a more secure basis for knowledge. The method he adopted became known as Cartesian Doubt. An approach that doubted everything until Descartes arrived at the one thing he could not doubt, his own thinking. The process produced Descartes first principle of philosophy his cogito ergo sum or "I think therefore I am" (Descartes 1637:53).

These conclusions have interesting implications for teaching and learning; they pose a challenge to education as to what should be included in learning and how learning is to be achieved. A great deal of modern curricula are focused on the teaching of received wisdom, the transfer of information. To what extent are students actually encouraged to think afresh, to start with their own ideas? Descartes provides an indication of the consequences of his philosophy in The Rules for the Direction and Cultivation of the Mind Garber summarises Descartes' approach as “True education, then, must involve not the transfer of information, doctrine or dogma, but simply the cultivation of the intellect.” (1998:128). Meditation or thinking was for Descartes the highest form of intellectual activity; Russell quotes Descartes as defining such thinking as:

A thing that thinks, he says, is one that doubts, understands, conceives, affirms, denies, wills, imagines and feels - for feeling as it accrues in dreams, is a form of thinking. (Russell 1961:548)

A route to such meditation was to be achieved through the process of Cartesian doubt. However, as Garber (1998) argues, Descartes' philosophy was hierarchical. Descartes uses the analogy of a tree with meta-physical roots, physics as a trunk and all other worthwhile forms of knowledge branching out from there. While meditation was considered to be the most
important form of wisdom, Descartes clearly recognised value in four other levels of wisdom:

The first includes self-evident truths ‘so clear in themselves that they can be acquired without meditation’; the second includes what we learn from the senses; the third involves what we learn by talking with others, and the fourth, what we learn by reading books ‘written by people who are capable of instructing us well.’ (Garber 1998:134)

Descartes’ hierarchy of wisdom could provide a structure or agenda for learning; a curriculum that includes both discovery through observation and the study of books. The emphasis on thinking and the search for reasons for knowing are evident in the work of Descartes; in Bacon there is the systematic testing of ideas in practice. This could be seen as an early assertion of the need for reflection in learning and knowing, contemplation, as perhaps advocating a form of experiential learning? Such pre-Enlightenment thinking resonates in late-modernity. In times of rapid and widespread change, individuals are less likely to be able to rely on past learning and experience alone to guide their actions. In a climate of uncertainty they will need to think and reflect, to make decisions and judgements. The recent enthusiasm for key skills in post-compulsory education (Dearing 1996) is illustrative of this type of thinking. Key skills are less reliant on received wisdom, on bodies of knowledge, but aim to focus on the abilities that facilitate future learning. In Descartes we can find philosophical themes and thinking from early modernity that threads through to late-modern questions to do with the process and content of teaching and learning.

Given that other levels of wisdom are recognised by Descartes one should not exaggerate his rejection of past authority and scepticism about information available to us through the senses. Bacon’s and Descartes’ ideas clearly influenced those of the Enlightenment (Gay 1977, 1969:6, Porter 1990) and their works raised the issues of empiricism and reason. The rejection of past authority was a theme that Descartes shared with Francis Bacon. Paradoxically, it is a theme shared with post-modernism;
could it be a theme that emerges in times of change? The relativism and use of the analogy of narrative that is characteristic of the post-modernist Lyotard (1992) is strongly asserted in pre-modern Descartes who wrote:

My present aim, then, is not to teach the method which everyone must follow in order to direct his reason correctly, but only to reveal how I had tried to direct my own. One who presumes to give precepts must think himself more skilful than those to whom he gives them; and if he makes the slightest mistake, he may be blamed. But I am presenting this work only as a story or, if you prefer, a fable in which, among certain examples worthy of imitation, you will perhaps also find many others that it would be right not to follow; and so I hope it will be useful for some without being harmful to any, and that everyone will be grateful to me for my frankness. (Garber 1998:136)

If one asserts crude demarcations between what is modern and that considered post-modern, one is presented with a paradox in which a founding father of the modern appears to articulate values associated with the post-modern. The above quote, with reference to fables and stories, hints at philosophical pluralism and relativism. It could be described as post-modernist. However, the late-modern perspective asserted here attempts to avoid such crude demarcations. It is a perspective that acknowledges diversity and change. It is a perspective that is reluctant to suggest there has been a structural break with the past, a form of post-modernism which heralds an entirely new way of thinking and understanding. As the examples in this chapter illustrate, themes claimed as post-modern, late-modern or reflexive modern have developed from past experience. The relationship of the late-modern to the modern thinking does not, as the term post-modern suggests, represent a structural break with the past.

For Bacon the rejection of past authority was not driven by a desire for pure reason, as with Descartes, but rather a stress on personal experience and the reliance on sensory information. Bacon was interested in improving the quality of life; finding solutions to practical problems through scientific inquiry.
A testing of theory in practice that was reminiscent of the above quotation from Aristotle (Irwin 1985:290), that knowledge should be based on empirical facts that can be tested in experience. There is a pragmatism in Bacon that is relevant to late-modernity. In educational terms, Francis Bacon would have preferred a form of experiential learning to the absorption by students of what was claimed to be known or the pursuit of meditation advocated by Descartes. In this sense Bacon may have influenced another Enlightenment theme - that of empiricism.

Empiricism

John Locke, as an Enlightenment thinker was closely associated with empiricism in philosophy. Locke emphasised the importance of empirical information in addition to that gained through reason. By empirical he referred to information that is available to us through our senses. He argued that the senses provide an assurance to knowledge. In his "Essay Concerning Human Understanding" (Yolton 1977) he affirms the importance of empirical knowledge gained through the senses:

> from the certainty of our senses and the ideas we receive by them, that we know not the manner wherein they are produced: ... And of this, the greatest assurance I can possibly have and to which my faculties can attain is the testimony of my eyes, which are the proper and sole judges of this thing ... which is a certainty as great as human nature is capable of concerning the existence of anything but a man's self alone and of GOD. (Locke [Yolton1977]:340)

It was the prominence given to empirical information that was said to have distinguished Locke from Descartes. Locke argued that "the senses give us an assurance that deserves the name of knowledge" (Ayer 1991:156). Descartes on the other hand appears to have judged sense information as unreliable, in need of reason and philosophical reflection before we can truly call it knowledge. However, it is not entirely clear how far Locke parted with Descartes on the reliability of sense information. The differences between the two may be exaggerated. It could be that Locke was being pragmatic
about sense information and what Descartes referred to as natural belief.
Was he suggesting that Descartes' philosophical reflection was desirable,
aspiration, while arguing that empirical knowledge was more feasible? This
alternative argument is presented in Ayer (1991) and supported by
Woolhouse (1988) who argued that for Locke the senses only provide ideas,
the material for knowledge, rather than knowledge itself. For Woolhouse
"The frequent classification of Locke as an empiricist must not be allowed to
hide that he clearly holds that reason too is essentially involved in the
was "commending the candlelight of natural (or at best, probable) belief
because the broad sunshine of certain knowledge is impossible." (1991:156).

If Descartes and Bacon provided some of the seeds from which the
Enlightenment philosophies were to grow, John Locke was representative of
one of the first generation of Enlightenment thinkers. The empiricist tradition
was further developed, by what Hamilton (1992:25) refers to as a member of
the second generation of Enlightenment thinkers, David Hume. The
empirical element of Hume's philosophy is embedded in his theory of
causation. For Hume reason and experience, the empiricism that derives
from perceiving through the senses is connected with reason. People tend to
infer or reason on the basis of past experience of cause and effect. In
answer to the question where does reason and knowledge come from?
Hume argued from "EXPERIENCE. In that all our knowledge is founded; and
from that it ultimately derives itself." (Stroud 1977:18). Clearly there are
connections here with the role of experience in learning. Dewey argued
"there is an intimate and necessary relation between the processes of actual
experience and education." (Kolb 1984:5). Is the experiential learning,
advocated by Dewey (1938) and Kolb (1984), rooted in Enlightenment
thinking, and essentially modern approach to learning? That knowledge and
learning comes from experience is not purely an Enlightenment idea; it is
also a pre-modern theme evident in Aristotle's 'Nicomachean Ethics' (Irwin
1985). Aristotle argued that experience can be more useful than knowledge,
that it takes time to gain experience which is essential to wisdom and
intelligence: "Intelligence is difficult because it involves experience and deliberation" (Aristotle 1142a14 [Irwin 1985]). In the work of John Locke our understanding of the role of experience was developed during the Enlightenment and is a distinctly modern theme. If so, this raises the question of what might constitute a late-modern approach to learning and education. Dewey certainly recognised the importance of experiential learning in an ever-changing world (Kolb 1984:5).

The development of confidence in the powers of reason and empiricism came with the Enlightenment. It produced self-confidence, a faith in science, reason and empiricism. This Peter Gay referred to as representing a "Recovery of Nerve" (Gay 1969:3). A belief in the potential power of human action and enquiry, a confidence that humankind could find iron laws that governed nature and behaviour. As a key Enlightenment thinker, Hume presents a challenge to the reading of the Enlightenment philosophies as representing a 'Recovery of Nerve'. At the centre of the Enlightenment was the new found confidence in knowledge gained from empirical investigations. The challenge came from Hume's scepticism, as Hampson argues:

On the philosophical front, the most telling blows against the self assurance of the Enlightenment were those struck by Hume. Step by step he systematically demolished its claims to have established its values on any solid foundation. (Hampson 1968:119)

It is Hume's theory of causation that leads to a more sceptical view of science and empiricism. He argued that the theory of causation is based upon the habitual association of events. 'Impressions' of events for Hume are derived from experiences gained through the senses (Stroud 1977:22). The sequence of such inference can be represented as follows.

1. If in past experience all impressions (observations for example) of 'x's have been followed by impressions of 'y's.

2. When in the present one gets an impression, such as an observation, of an 'x'
3. One believes that a ‘y’ will follow the impression of an ‘x’. A future event is therefore predicted.

This sequence can be reinforced by highly controlled experimental science that leads one to believe that ‘x’ leads to ‘y’. However, Hume argued that this inferred connection between events provides no more than a probability about cause and effect. Hume would have argued that the belief that in the above a ‘y’ will follow an ‘x’ has no rational support or justification; because events had been observed to occur frequently in the past is no guarantee they will continue to be observed in the future. For example, the observation of a thousand white swans does not exclude a black swan from being observed in the future. As Russell explained, we have experience of futures that have come to resemble the past; these he refers to as past futures: “We have experience of past futures, but not future futures, and the question is: Will future futures resemble past futures?” (Russell 1912:36). For Hume the answer is not provided by inference about causality. Hume is quoted as writing; “the supposition that the future resembles the past, is not founded on arguments of any kind, but is derived entirely from habit.” (Russell 1961:644).

At the heart of the Enlightenment philosophies there is the scepticism of David Hume, a scepticism that undermines the self-confidence in scientific method and the recovery of nerve noted by Peter Gay. There can be no certainty and ultimate truth with Hume, instead there is an acknowledgement of subjectivity. Russell summarises the position:

It is evident that he started out with a belief that scientific method yields the truth, the whole truth, and nothing but the truth; he ended, however, with the conviction that belief is never rational, since we know nothing. (Russell 1961:644)

Hume appeared to be ambivalent in how to respond to his own claims to have discovered the limits of reason. At times he appeared to be in despair that his philosophy could offer so little comfort to those seeking human progress through science. In this sense his questions about causality undermined the dominant themes of the Enlightenment, those of reason,
science and empiricism. Hume also seemed to advocate a pragmatic response to the sceptical outcomes of his thinking, that people should simply get on with everyday life and not concern themselves with the problems associated with learning from past experience and habit. In the *Treatise of Human Nature* Hume argued that because of the imperfections of human reason:

I am ready to reject all belief and reasoning, and can look upon no opinion even as more probable or likely than another. ... I am confounded with all these questions and begin to fancy myself in the most deplorable condition imaginable ... Most fortunately it happens that since reason is incapable of dispelling these clouds, Nature herself suffices to that purpose, and cures me of this philosophical melancholy and delirium, ... I dine, I play a game of backgammon, I converse, and I am merry with my friends; and when after three or four hours amusement, I would return to these speculations, they appear so cold, and strained, and ridiculous, that I cannot find in my heart to enter into them further. (Quinton 1998:36)

As it is argued below there are echoes of Hume in later philosophical writings. Despite his theoretical doubts Hume, it is argued, accepted in practice the law of causation (Quinton 1998:37). This response from Hume could be seen as a form of pragmatism, a making do with hypotheses for as long as they appear to work in practice. Pragmatism in philosophy is associated with much later American traditions such as those adopted by Pierce, James and most notably by John Dewey. It has recently been advocated as a response to our 'post-modern' condition of philosophical pluralism (Rorty 1999). In Hume's philosophy there was an inability to accept one opinion as more probable than another. This acceptance that there is an absence of a secure foundation for knowledge is a view that corresponds with the discussion of narrative that can be found amongst contemporary critics of the Enlightenment, such as those associated with post-modern social theory (Smart 1996). Yet the scepticism of Hume, a key Enlightenment figure, is central to the concept of reflexivity a corner stone of contemporary critical theory; Zygmunt Bauman simply defines “reflexivity as
scepticism" (1993 p.201). Once again Enlightenment themes emerge in contemporary critiques, possibly repackaged and with a renewed relevance in the contemporary discourse. Scepticism was as much at the heart of the Enlightenment, arguably the genesis of modernity, as it is in late-modernity now defined in terms of reflexivity.

It may be structurally convenient and tidy to place Hume as a second-generation development of Locke’s empiricism (Hamilton 1992:25). Hume’s scepticism should in itself caution one against such packaging. Barry Stroud warned against reducing Hume’s philosophy simply to the service of empiricism (1977:219). In this respect Stroud is closer to Russell. Stroud pointed to a much more interpretativist theme in the work of Hume, an account that places him more firmly in a social science tradition of enquiry to that of the empirical natural sciences. Stroud argues:

he wanted to answer the more fundamental philosophical questions of how people even come to have a conception of a world, or themselves, and how to think about it scientifically (or morally, or politically, or religiously or aesthetically) at all. ... The abstract study of such things as ‘meanings’, concepts and principles was to be engaged in only in so far as they could be grounded in what people actually think, feel and do in human life. (Stroud 1977:222)

However, it was a self assurance about the natural sciences that was often cited as a key Enlightenment theme. The philosophies had confidence in the power and potential of science to provide for human progress; as Zygmunt Bauman argued the Enlightenment was a period where “the priests of religion were replaced by the priests of science” (Bauman 1995:21).

Science

John Gray links the work of Francis Bacon directly to a key Enlightenment preoccupation with science. In “Enlightenment’s Wake” he writes:

One of the central elements of this modernist world view is a conception of science as the
supremely privileged form of knowledge - that form of understanding the natural world which yields control and mastery of it.” (Gray 1995:158)

Humankind was thought to be able to control and exploit the natural world for its own ends. The confidence bestowed in the scientific mode of enquiry led to attempts to apply scientific methods to social and political questions. Despite his scepticism Hume had a degree of confidence in science.

Where experiments he concludes are judiciously collected and compared, we may hope to establish on them a science, which will not be inferior in certainty, and will be much superior in utility to any other of human comprehension. (Gay 1969:334)

This element of Enlightenment thinking was to become a fundamental, enduring and hegemonic feature. Scientific enquiry is perhaps the dominant idea for which the Enlightenment is associated, remembered and symbolised. It is a theme that is regularly illustrated by the drawing of a hero of the period, Sir Isaac Newton, experimenting with optics and light (Porter 1990, Hall 1992). All the philosophical ‘luminaries’ of the period are said to have worshipped Newton; Voltaire is quoted as calling Newton the greatest man that ever lived (Gay 1969: 128). It is interesting to note that the confidence and self assurance in human understanding gained through science was not shared by Newton. After all the heliocentric science that flowed from Copernicus, Kepler, Galileo to Newton no longer placed man and earth at the centre of the universe. Compared to the infinity of the universe one might have expected humankind to register its own insignificance. Newton himself was noted for his modesty for using the phrase now embossed in British coinage that of “standing on the shoulders of giants” (Partington 1996:493). It should be noted that Bragg (1998) provided a less positive account of Newton’s character. However, Newton is said to have compared his achievements to that of “a boy discovering pretty pebbles on the seashore while the great ocean of truth lay all undiscovered before me.” (Gay 1969:134). Peter Gay argues that the philosophies liked to repeat such remarks “as valuable support for the Enlightenment’s campaign against
system building and on behalf of philosophical modesty" (Gay 1969:134). Given such humble values it is surprising that the Enlightenment is so firmly associated with a belief in the power of science and a confidence that science would discover universal knowledge. Voltaire is quoted comparing Newton more favourably against Descartes: “Newton, in contrast, respected the facts, heroically faced obscure phenomena, and refused to make systems" (Gay 1969:139). The refusal to construct systems mitigates against the image of the Enlightenment philosophies as the pursuit of universal knowledge. Yet this perception is a feature of contemporary critical perceptions of the Enlightenment discussed in Chapter Two. Within the philosophy of the Enlightenment itself there was caution in relation to system building and universal truth claims. Does this have a similarity with the post-modern scepticism with regard to meta-narratives and a preference for philosophical pluralism?

Science captured the philosophical and the popular imagination during the Enlightenment. The achievements of science were not solely disseminated by the scientists. Voltaire helped popularise Newton and science and argued that “very few people read Newton” (Becker 1932:60). The eighteenth century has another parallel with our own time, there was a demand for accessible and popular science books. It was the work of enthusiasts for Newtonian science that generated the scientific discourse associated with the Enlightenment and produced Gay’s “Recovery of Nerve” (1969). Voltaire was one of the most notable publicists, or man of letters, who communicated the new scientific method. Of such Enlightenment writers Becker assiduously argues “in simple fairness ... the Philosophers were not philosophers. I mean to say they were not professors of philosophy ... ”(1932:34-35). Hamilton (1992:40-41) points to the explosion of printed material, libraries and literary societies that spread the word and facilitated the communication of Enlightenment; an aim of this process was public education. Could the minor information revolution that accompanied the Enlightenment helped to have generated the dominant reading as a discourse of confidence in Enlightenment science? Are there other parallels
with the present day information revolution? In the late twentieth century there is an explosion of material, in the form of digital information, web pages and computer conferences, all help to mediate contemporary discourse. In their enthusiasm for Newtonian science the Enlightenment philosophies “pushed its philosophical implications far beyond what scientists themselves would have thought warranted. They tried to apply the scientific style of thinking to the regions of aesthetic, social, and political theory” (Gay 1969:126). The scientific push produced a search for universal laws, a belief in progress and the Enlightenment genesis of the social sciences.

**Universalism**

The Enlightenment was an optimistic epoch, one where the philosophies believed that scientific method would discover universal principles. It aimed to establish theoretical laws, including those from social science, which could apply to all human beings regardless of their location in time or space. David Hume is quoted as writing “that there is greater uniformity among the actions of men, in all nations and ages, and that human nature remains still the same, in its principles and operations” (Gay 1969:168). The Enlightenment as a universalist project is an important reference point for the period (Hamilton 1992:21). However as Hamilton noted, the Enlightenment also heralded the process whereby knowledge was placed in delineated subject compartments. The development of subject specialism is one example of an early challenge to universal knowledge, no longer could a person expect to know everything (Hamilton 1992:24). Given that elements of contemporary theory emphasise our epoch as one of diversity and fragments (Bauman 1995) it is interesting to note such themes dominated early social science.

Peter Gay provided an example of the cultural relativism characteristic of the Enlightenment. Early social science utilised a comparative method drawing on the author’s experience of cultural diversity acquired through travel. Montesquieu, as perhaps the first sociologist and writing in the eighteenth century, celebrated the diversity produced by the environment and culture;
The logic of Montesquieu’s social science is the logic of cultural relativism: There is he believes no universally applicable solution. There are only types of solution. (Gay 1969:327)

There are elements of Universalism in Enlightenment thinking, though these seem to sit alongside recognition of diversity. Adam Ferguson, as one of the earliest sociologists, writes of unity and diversity. He argued that human nature is uniform across space and time. At the same time Ferguson recognised the diversity of institutions and ideals, for him this was the subject matter of the social sciences (Gay 1969:338-339).

Commentators have asserted that Universalism was a key Enlightenment theme (Hamilton 1992, Gray 1995, Smart 1996). As the above examples indicate, on closer examination many of the key Enlightenment themes are more complex than the simple categories suggest. Awareness of diversity, even cultural relativism, was also a feature of the eighteenth century Age of Reason. Without caution, simple categories that are used to guide the reader can also risk confounding them. Such categories equate the Enlightenment, with science, reason, empiricism and Universalism (Hamilton 1992:21). The same problem arises in providing a location for Kant within the key themes. Kant’s contribution could be discussed under a number of the categories.

Hobsbawn argued that “The Enlightenment was the framework of Kant’s typically eighteenth century thought” (Hobsbawn 1975:250). Although considered a key Enlightenment philosopher Kant was reported to have been rarely read in the eighteenth century. “But the full Kantian philosophy, in all the majesty of its architectonic unity, was known to very few men in the eighteenth century” (Hampson 1968:196). Kant developed and synthesised many Enlightenment themes; his ‘Critique of Pure Reason’ provided a response to Hume’s scepticism and a more secular alternative to Descartes. Discussion of Kant could have therefore taken place above under the above headings of Reason or Empiricism. Why then consider Kant under the banner of Universalism? After all he was also noted for the concept of subject centred reason, surely a post-modern perspective? Kumar described
subject centred reason as “This privileged the solitary, individual ego, seeking to comprehend the world in its totality from the viewpoint of the individual mind.” (Kumar 1995:174). Kant in the Critique of Pure Reason expresses the view.

It has hitherto been assumed that our knowledge must conform to objects; but all attempts to ascertain anything about these objects apriori, by means of concepts, and thus to extend the range of our knowledge, have been rendered abortive by this assumption. Let us make the experiment whether we may not be more successful in metaphysics, if we assume that the objects must conform to our knowledge. (Kant 1781:15).

It is therefore something of a misnomer to consider Kant under the heading of Universalism. In one sense the subject centred reason contained in the above quotation does provide an overarching universal principle, what post-modernists might refer to as a meta-narrative. There is a paradox that Kant, clearly an Enlightenment philosopher, a central figure in the philosophical account of the modern, also provided a subject centred approach to reason that is associated with contemporary versions of post-modernism. However, Kant also recognised that knowledge comes from experience (Kant 1781:30). There are elements of Universalism within Kant’s philosophy. These are evident in terms of his use of a priori and universal moral law.

It was said that Hume with his questions about causality had awoken Kant from his slumbers (Quinton 1998:59). It took Kant twelve years to answer Hume with the Critique of Pure Reason. Until Kant, a priori knowledge; that is knowledge that is known before experience and cannot be falsified by experience: was defined as ‘analytic’. Analytic knowledge included propositions where the “predicate is obtained by merely analysing the subject” (Russell 1912:46). Russell gives the example of the analytic “a tall man is a man, or an equilateral triangle is a triangle. Such a proposition follows from the law of contradiction; to maintain that a tall man is not a man would be self contradictory” (Russell 1961:678). Before Kant, knowledge that was not analytic was referred to as synthetic, it was considered a posteriori
when it is acquired on the basis of experience and could therefore be falsified by experience. Concepts that are *a posteriori* were therefore considered empirical derived from experience (Scruton 1995:474). To summarise, prior to Kant analytic knowledge was therefore aligned with *a priori* and synthetic knowledge with *a posteriori*. Kant's innovation was to argue that there was knowledge that could be categorised as "synthetic knowledge *a priori*".

Kant accepted Hume's argument that the law of causality is not analytic, dependent on reason alone. For Hume the law of causality was synthetic. Therefore one could not be certain of a law of causality that is based on experience alone. Kant argued that the law of causality was synthetic, but he argued that causality was a principle or category we know *a priori*, it therefore provided an example of 'synthetic knowledge *a priori*'. Causality involves a mental process of reasoning that we know *a priori*, it is a mechanism we use to transform sensory information into knowledge. Kant developed twelve categories of such mental processes that he argued are *a priori* and enables us to make sense of sensory information. These categories are the means by which our mental processes enable us to interpret and have understanding of experience. Kant attempts to use deduction to provide a proof of his synthetic *a priori* categories, a deduction that did not rely on empiricism because empiricism is in itself dependent on the categories. In order to provide such proof Kant used "The Transcendental Deduction of the Categories" (Scruton 1995:597). David Bell provides an outline of the central theme that runs through Transcendental Deduction. The interpretation offered by Bell appears reminiscent of *cogito ergo sum*:

There is an inescapable condition that must be met by any plurality of mental states and mental contents if they are all to belong to one, single unified consciousness - if for example, they are all to be my states and contents of consciousness. The necessary condition, according to Kant, is that the consciousness or mind in question should possess self consciousness: I must not merely have the capacity to be in an arbitrary mental state, 'S', I must also be able to know that I am in that state.
Kant’s response to Hume has implications for learning theory, specifically reflective learning. Knowledge has been defined as experience transformed. Peter Jarvis offers such a definition “Learning is defined here as the process of transforming experience into knowledge, skills, attitudes, values, feelings, etc.” (Jarvis 1995:59). The transformation of experience through some form of reflection connects directly with the synthetic a priori, as demonstrated above, that was at the heart of Kant’s meta-physical philosophy. In the Critique of Pure Reason Kant challenges Hume; as Ralph Walker argues succinctly: “to gain knowledge from experience we must interpret experience, and we can interpret experience only if we have principles to interpret it with - principles that experience cannot itself supply.” (Walker 1998:26). As Scruton (1995:472) demonstrates, Kant uses the term ‘faculty’ to demonstrate how we acquire knowledge; it is through the faculty of sensibility we obtain the raw material of experience and the faculty of reason that we gain understanding and develop concepts. Are there not strong parallels here with the need for reflection on experience as a means of transforming that experience into learning?

The other area within which Kant presented universal law was that of ethics, or his Meta-Physics of Morals. For Kant moral law has a similar standing to that given to his meta-physics of knowledge. Kant provides what he termed the ‘categorical imperative’ a synthetic a priori law that was to be followed for its own sake and not for any account of personal interest; Kant rejected utilitarianism. The categorical imperative is intended to be a rule to govern all action without exception. In the Meta-Physics of Morals, Kant was seeking to establish a supreme principle of morality; he defined this principle in the categorical imperative. Bell (1996:601) argued that there are a number of different formulations of Kant’s categorical imperative. One of the most frequently quoted comes from the “Groundwork of the Metaphysics of
Morals" (1785). This Walker translates as “act only on the maxim through which you can at the same time will that it should become a universal law” (Walker 1998:30). Therefore with the categorical imperative, action that is always right for one person needs to be right for everyone. For Kant virtue does not come from the consequences of action, but through adherence to the categorical imperative. Walker argues that “Kant’s formulation is designed to help me identify certain actions as wrong,” (1998:32). He argues that Kant recognised the categorical imperative as a frequently used maxim of everyday life; he quotes Kant: “In fact everyone judges actions by this rule to see whether they are morally good or bad.” (Walker 1998:34). From the categorical imperative Kant argued that other maxims follow. The Universal Principle of Right asserts individual freedom; “Every action is right if it or its maxim allows each person’s freedom of choice to coexist with the freedom of everyone in accordance with a universal law” (Walker 1998:11). Comparisons with Thomas Paine were made by Russell “His principle that every man is to be regarded as an end in himself is a form of doctrine of the rights of Man” (1961:678). Interestingly Zygmunt Bauman reached a similar conclusion, he argued that the post-modern ethic is concern for the Other. Bauman acknowledges that the ethic draws heavily on an Enlightenment or modernist thinker:

Levinas draws a most radical conclusion from Kant’s solution to the mysteries of moral law inside me, but only such radicalism may give justice to Kant’s conception of morality as a posture guided solely by concern for the Other for the Other’s sake, and the respect for the Other as a free subject and the end in itself. Other milder versions of post-Kantian ethical theory can hardly match the enormity of the moral demand which Kant’s conception entails. (Bauman 1993:49).

Tolerance

In Kant we can therefore identify ideas that fit the Enlightenment theme of Universalism. Roy Porter asks whether the Enlightenment was a period of unity or diversity (1990:51). Any claim that the Enlightenment was Euro-
centric (Hall 1992) needs to be tempered by the awareness and appreciation of cultural diversity that characterised the philosophies. As Porter argued “The philosophies mocked narrow minded nationalism along with all other kinds of parochial prejudice” (1990:51). The discovery of diverse cultures such as those of Tahiti were viewed positively, as offering something for which others could learn from. Porter notes that Diderot praised aspects of Tahitian culture and used their example to challenge attitudes in Europe (1990:61). Porter also illustrates this point with reference to Captain Cook, who held less romanticised views of Tahitian culture than Diderot, but subscribed to a key Enlightenment value.

Cook put into practice the Enlightenment maxim that one should not sit in judgement upon the ways of other peoples, but rather seek to understand them in the context of their circumstances, and then use one’s knowledge of them to improve understanding of oneself. (Porter 1990:63)

Critics of the modern as a grand-narrative, all embracing universal theory (Smart 1996:406), fail to acknowledge the awareness and respect for cultural diversity that is so central to the Enlightenment and therefore modernity. The use of narrative to explore and express ideas was also accepted in the Enlightenment philosophies. Voltaire’s “Candide” is a case in point, the novel mocks a crude form of positivism, and functionalism, through the character of Dr Pangloss who claimed:

It is proved, he used to say, that things cannot be other than they are, for since everything is made for the best purpose, it follows that everything was made for a purpose. Observe: our noses were made to have spectacles, so we have spectacles. (Voltaire 1759:20).

In “Candide” Voltaire’s form of utopia was not to be found in Europe, but South America in his culturally unique and imaginary Eldorado. It can be seen from the above discussion that tolerance and appreciation of diversity were also features of the Enlightenment.
Toleration for Locke was required because of the imperfection of human beings and as a means to acquire freedom to construct a good way of life (Gray 1995:18). As Gay (1969) argued the demand for toleration that emanated from the Enlightenment was entirely consistent with the characteristics of Enlightenment philosophy. In their tolerance and humanity Gay noted the parallels between Christianity and Enlightenment philosophies, a comparison not comfortable for those of the Enlightenment, who of course had different reasons for their views; they were actively challenging the power of the established church.

The demand for the toleration of religious minorities, philosophical dissenters, and sexual deviants was the practical correlative of these propositions about man and society, reinforced by the philosophes’ characteristic view of philosophy - skeptical, empiricist, a little cynical, and heavily concentrated on social ethics. Montesquieu and Diderot, Wieland and Beccaria, Voltaire and Lessing all sound the same note, ... to kill others for their ideas is to exaggerate the importance of ideas. Since men are all hopelessly ignorant of the ultimate mysteries shrouding the universe, it would be the utmost barbarity and absurdity to constrain, let alone persecute, those who hold views divergent from the dominant one: certainty is the mother of intolerance, disdain for the metaphysical construction is an inducement to toleration. (Gay 1969:399).

Toleration of diversity was viewed essential for the pursuit of knowledge and civil politics (Gay 1969:400). The Enlightenment theme of toleration connects with the emancipatory thread that is associated with reflective learning and discussed in chapter four.

The Enlightenment philosophies were anti-war and anti-imperialism; they favoured tolerance and diversity. Gay captured the tone of the Enlightenment attitude to war with quotes from Lessing and Voltaire; “the warrior king covers his people with laurels and with misery. Glory is not worth the price: what costs blood is not worth blood” (Gay 1969:402). In Kant’s later work was a search for conditions that would enable peace. Kant argued
for a form of United Nations, a federation of republican states governed by national and international law. Whether or not Kant's meaning of republican was democratic is open to question. Russell (1961:684) argued Kant was not anti-monarchy, but was suspicious of democracy and favoured a simple separation of powers. Peter Gay provides a convincing case that Kant preferred more democratic republics. With respect to republics "Kant argues it is essential not merely because the republican form is a pure form in its origins, but also because it permits those whom war affects most intimately to decide their own fate: in other states where the ruler is not a 'fellow citizen in the state but the owner of the state ... that ruler, precisely the one who will lose nothing of his banquets, hunts, chateaux, court entertainment' in war time treats war as a 'kind of pleasure party" (Gay 1969:406). The search for peace through tolerance and the acceptance of diversity was then a core Enlightenment theme. The Enlightenment enthusiasm for science and universal law did not anticipate a form of totalitarian meta-narrative that would attempt to write a script as to how all should live. The demand for tolerance was also a defence of freedom and autonomy of the individual. As Gay argued "The philosophies stood for reform; they stood at the same time, for freedom in its many guises - freedom of thought, speech and the press, freedom to participate in the shaping of public policy, to pursue one's career and realise one's talents." (Gay 1969:497). The Enlightenment's enthusiasm for empiricism, science, reason, tolerance, freedom and autonomy as a key to human progress presented a problem. How could the majority of people benefit from these insights and utilise such learning? One answer was provided by some - education.

**Education**

As outlined above, the Enlightenment gained inspiration from Bacon, Newton and Locke; Diderot dedicated the *Encyclopedie* to them. Both Bacon and Locke wrote on education. One of Bacon's most influential texts, perhaps the most influential, was the "Advancement of Learning". Here he advocated a form of learning by doing and through discovery. Bacon encouraged learning that produced new knowledge using scientific methods of induction. Bacon
shared with Descartes a certain disdain for received authority and thereby represented a challenge to the conventional educational wisdom of his time. In advocating learning from experience and investigative enquiry there are similarities with the philosophy of education advocated by John Dewey (1916). More recently a practice-orientated response to late-modernity has reached similar pragmatic conclusions. Jarvis argues that in a world of rapid and widespread change what counts as useful knowledge can quickly become simply dated information. He (Jarvis 1999) argues that knowledge is tested by its performability, it is tested in practice. It is this context that has produced and needs to nurture practice-based research and researchers, a grounded approach to research and theory, where theory is generated from the research into practice rather than precedes it. Jarvis argues that such theory which develops from practice is produced by a new breed of research carried out by practitioner-researchers. Once again the logic of the earlier thinkers has flowed into and helped build the analysis of theories aimed at practical engagement with our late-modern times.

It was noted above that Aristotle recognised both the importance of the practical and of experience; these provide an aid to intelligence and the making of wise decisions. It was also suggested that the empiricism of Locke was pragmatic; as Ayer argued Locke preferred the candlelight of empiricism to the impossible sunshine of certain knowledge (Ayer 1991:156). Hume argued that all our knowledge is founded on experience (Stroud 1977:18). These philosophical observations were addressing epistemology rather than writing specifically about education. However, the parallels with experiential learning as developed by Dewey are clear. As will be discussed in the methodology chapter, there exists a strong relationship between the research process and reflective learning cycles; both produce knowledge. These traditions are acknowledged and entwined in accounts of practitioner research (Jarvis 1999)

Locke also wrote specifically on education with “Some Thoughts Concerning Education” (Yolton 1998). He argued, education is necessary for people to acquire the knowledge to live in the world. He advocated education that was
tailored to the needs of the individual. For this reason he opposed large classes and suggested 'sparing the rod' (Yolton 1998:184). The general principle that Locke advocated for the teaching of children was "to make learning play and recreation" (Yolton 1998:188). However, he limited his thoughts on education to the education of the children, or sons, of gentlemen. He had very different ideas about the education of paupers. "If any boy or girl, under the age of fourteen years of age, shall be found begging out of the parish where they dwell ... they shall be sent to the next working school, there to be whipped and kept at work until evening, so that they may be dismissed time enough to get to their place of abode that night" (Gay 1998:190). Locke's views on the education of paupers are consistent with views expressed by other Enlightenment writers when they reflect upon the mass of ordinary people, or what they disparagingly referred as the 'canaille'. There was a strand of snobbishness within the Enlightenment at times mixed with a paternalistic compassion. As Gay illustrated, Voltaire referred to the canaille as 'two footed animals'. Kant’s respect for the poor had limits 'the Volk', he wrote 'consists of idiots'. Diderot suggested the poor were too miserable and busy for enlightenment. Even the democratic Rousseau stated ‘the poor have no need for education’ (Gay 1969:518-519).

It is a matter of debate as to whether or not Rousseau was representative of the Enlightenment or simply wrote within it. He had relationships, or estrangement, with many of the key thinkers of the time including Hume, Diderot and Voltaire. It may be more accurate to consider Rousseau as somewhere between the thinking characteristic of Enlightenment and the Romantic Movement. Rousseau ushered in the Romantic Movement. He developed themes of educational innovation that were first advocated by Bacon. Like Bacon, he too favoured learning by doing and discovery. Rousseau believed in learning from direct experience:

Let us transform our senses into ideas, but not leap all of a sudden from objects of sense to intellectual objects. It is by way of the former that we ought to get to the latter. In the first operation of the mind let the senses be its guide. No books
other than the world, no instruction other than the facts. The child that reads does not think, he only reads; he is not informing himself, he learns words. (Rousseau 1764:168)

Rousseau's comments on books are ambivalent. Elsewhere in Emile (his primary text on education) this view of reading is both reinforced and contradicted; he recommended reading for Emile in adolescence "on his way to fifteen" (Gay 1969:545). The above quote is interesting as it combines many of the Enlightenment themes discussed earlier. Within it one can detect the empiricism of Locke, the assertion of reason and rejection of received wisdom characteristic of Descartes and the learning by discovery that was proposed by Bacon. Rousseau follows this quotation with an example of learning geography, not from theory gained through maps and globes but through first hand exploration of a child's locality:

Moreover the goal is not that he know exactly the topography of the region, but that he know the means of learning about it ... See the difference there already between your pupil's knowledge and mine's ignorance! They know maps and he makes them. (Rousseau 1764:171).

For Rousseau, education was a route to freedom and autonomy for the individual as well as being connected to wider social and political projects. The critical importance of education to politics was reflected in Rousseau's admiration of Plato; "Do you want to get an idea of public education? Read Plato's Republic. It is not at all a political work ... It is the most beautiful educational treatise ever written" (Rousseau 1764:40). Rousseau's Emile is not simply a book on education; the method of educating Emile is certainly not a recipe for mass education. The text also provides a vehicle for Rousseau's wider philosophical agenda. Despite his differences with the philosophies, Peter Gay argued that in his philosophy and approach to education "Rousseau urged men on in the direction that the Enlightenment as a whole wanted mankind to go." (1969:552)

The emphasis on reflection on experience as a basis for knowledge rather than a didactic absorption of received wisdom was a key Enlightenment
theme, one that, as illustrated above, was evident in the philosophy of Locke, Hume and Rousseau. In response to Hume’s scepticism and conclusion that there is no secure foundation for knowledge, Kant produced an argument with similar parallels to reflective learning theory. Kant argued that we gain knowledge from experience only if we interpret that experience (Bell 1996:598, Walker 1998:26). As has already been noted, learning is defined as the transformation of experience (Jarvis 1995:59). In educational literature knowledge has been defined in terms of information transformed or processed (Laurillard 1993). Such transformation for Laurillard can be facilitated by discursive activities. It is clear that the logic of Enlightenment philosophy has parallels with the educational literature concerned with learning and reflective learning in particular. In a late-modern world characterised by rapid change and philosophical pluralism, there is an educational case for learning that seeks to transform experience through reflection and reason. The need for such education is embedded in Enlightenment thinking and modernity itself. As the examples in this chapter illustrate, contemporary thinking in education is rooted in modern social philosophy and in the case of Aristotle pre-modern philosophy. This is not to suggest that nothing has changed; that all we are witnessing is a form of speeded up continuity. Instead it is to construct a late-modern perspective on education that acknowledges a link to the past and learning that has built upon the reflection of experience and the experience of others. The educational implications of the Enlightenment and education as an implicit Enlightenment theme could perhaps be more fully acknowledged.

The Makings of Modernity

The chapter has attempted to define modernity through an exploration of the Enlightenment. It presents a cultural rather than economic perspective, defining the makings of modernity in terms of philosophy and ideas. The significance of the Enlightenment as a defining moment in the creation of the modern age is widely acknowledged by contemporary commentators (Gray 1995, Hall 1992, Kumar 1995, Beck 1992, Beck, Giddens, Lash 1994, Bauman 1995, Habermas 1982). The chapter differs from these
commentators in adding education as a key Enlightenment theme. In this respect the chapter follows Gay (1969) who acknowledges the significance of education in "The Pursuit of Modernity" (Gay 1969). As the above discussion indicates there were elements of Enlightenment philosophies, which were elitist and bourgeois liberal. However, the Enlightenment was also revolutionary; it paved the way for the French Revolution and created the clarion call of liberty, equality and fraternity. The Age of Reason was progress driven as Hobsbawn argued; the Enlightenment ideology aimed:

To set the individual free from the shackles which fettered him was its chief object: from the ignorant traditionalism of the Middle Ages, which still threw their shadow across the world from the superstitions of the churches (as distinct from natural or rational religion), from the irrationality which divided men into a hierarchy of higher and lower ranks according to birth or some other irrelevant criterion. ... The reign of individual liberty could not but have the most beneficent consequences. The most extraordinary results could be looked for - could indeed already be observed to follow from - the unfettered exercise of individual talent in the world of reason. At the beginning of this century witches were still widely burned; at its end enlightened governments like the Austrian had already abolished not only judicial torture but also slavery. (Hobsbawn 1975:20)

The above discussion aimed to provide the broad brush strokes that define modernity, themes that were refined and developed with a more democratic ethos by later modernist writers. It is clear from this discussion that themes associated with our times, defined in the next chapter as late-modernity, were evident in the Enlightenment itself. This represents a point of departure with some versions of post-modernism. Post-modernism as a concept suggests there has been a structural break with the past, rather than change and evolution, with elements of continuity. Such change need not be confused with the Enlightenment optimism regarding the onward march of modernity and progress. With three hundred years of experience and the benefit of hindsight it is possible to look back critically at such assumptions about
modernity and progress, which can appear somewhat naïve. Although providing very eloquent and perceptive insight into the present condition, some versions of post-modernism appear to set themselves up in a binary opposition to the past. As a consequence, the Enlightenment modernity appears almost as a caricature, and one that is very distant from the philosophers discussed in this chapter. Bauman suggested that fraternity, equality and liberty became the clarion call of the Enlightenment. He concluded that tolerance, diversity and justice were perhaps themes of a post-modern condition. While broadly sharing the conclusions, this chapter has demonstrated that these 'post' modern themes were evident in the Enlightenment philosophies. As Bauman acknowledged in his Post-modern Ethics (1993:49) the radical implications of concern for the other for the other's sake is the only justice to the moral demand of Kant's categorical imperative.

A task of this thesis is to establish the philosophical themes that thread through the social philosophy of modernity, including contemporary modernity and weave these into an educational agenda for learning in post-compulsory education. The Enlightenment philosophies themselves had many of the ingredients that have been re-mixed and defined as post-modern. In the work of Hume radical doubt and scepticism exist at the heart of Enlightenment philosophy. Radical doubt and scepticism are at the heart of contemporary accounts of modernity and evident in the concept of reflexivity. Kant provided a subject centred reason and as Bauman (1995) acknowledged the basis for a post-modern ethic. Descartes, Bacon and Rousseau rejected past authority and advocated individual enquiry. Bacon adopted a pragmatic view of learning, providing knowledge that is contingent until alternative evidence is presented. The philosophies used novels and narrative as a means to explore ideas, offer interpretations and suggest alternative ways of being. Even the empiricism of Locke is tempered by an acknowledgement of a lack of certainty.

Throughout these philosophical writings there are challenges and implications for education. Philosophers like Francis Bacon, who influenced
later Enlightenment thinking challenged a didactic view of education. The hegemony of scientific reasoning can be traced to the Enlightenment and as illustrated in the introduction strongly influenced educational philosophers in this century, most notably in the educational work of John Dewey (1916). Questions about the current form and processes of contemporary education therefore need to be built upon an understanding of Enlightenment and post Enlightenment thinking.
Chapter Two: Consequences of Modernity A Social Context for Reflective Learning

This chapter aims to evaluate the key themes of contemporary social theory and present a case for a late-modern or reflexive modern perspective. It considers the changes that are said to have taken place and sketches the key characteristics of contemporary modernity. Reflection on experience has been discussed as a feature of Enlightenment philosophy. A number of contemporary social theorists have emphasised the reflexive nature of modernity, with the possible exception of Beck (1994), there is a parallel between the use of reflexivity in recent social theory and the emphasis on reflection found in education literature. The following chapters connect reflective learning to our reflexive modern condition. It is argued that we live in a more reflexive world where reflective learning has become more pertinent to our age; a time where individuals increasingly need to reflect and make decisions in the light of rapidly changing information.

Modernity: Educational Context.

That we are witnessing a transformation of modern Western economies is, I would have thought, not in doubt. (Allen 1992:201)

Anthony Giddens (1991) has characterised our times as a period of rapid and wide-ranging change, a period where people are forced to reflect on new information and reassess their taken for granted knowledge and experience of the world. As noted in the introduction past experience is less reliable as a source of guidance. Education needs to enable people to navigate through a modernity where what may have seemed universal, regulated and secure appears more complex, diverse and uncertain. There is a plethora of terms used to describe our current condition these include; late-modern (Giddens 1998a); reflexive modern (Beck 1992); post-modern (Bauman 1997); neo-modern (Szerzynski 1996); and recently liquid modernity (Bauman 2000). This chapter aims to explore the accounts of contemporary modernity. It
presents a case for the theoretical perspective that underpins the thesis, which seeks to provide a case for reflective learning located in a wider context of social theory and philosophy. The chapter makes a case for a late-modern or a reflexive modern perspective rather than post modern. It contrasts contemporary modernity with the Enlightenment modernity explored in chapter one.

If universalism, empiricism and science were key tenets of the Enlightenment what are the themes that characterise the contemporary critique of modernity? The concepts of reflexivity and Risk Society are elements in the late-modern critique of Enlightenment modernity. Other frames of analysis include reference to an information age or information society, post-Fordism, post modernism, globalisation, democratisation and the "Third Way" discourse (Giddens 1998). I have attempted to summarise the late-modern themes that have shaped the analysis in this thesis and these are outlined in Table 2.1 which represents a tentative positioning of Enlightenment and late-modern themes it also represents a possible construct for analysis of post-compulsory education and training.

Table 2.1

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<tr>
<th>Enlightenment Themes</th>
<th>Contemporary Themes</th>
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<tr>
<td>Science and Reason</td>
<td>Reflexivity and Scepticism</td>
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<tr>
<td>Progress</td>
<td>Risk Society</td>
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<td>Universalism</td>
<td>Diversity and fragmentation</td>
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<td>Toleration</td>
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<tr>
<td>Empiricism</td>
<td>Contingent knowledge / information</td>
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Many of the above contemporary themes have been associated with post-modernism; this thesis presents a late-modern or reflexive modern position that recognises the continued significance of Enlightenment philosophy together with the above contemporary themes of social theory. Enlightenment philosophy acknowledged that we learn through reflection on experience, as will be demonstrated in this chapter such learning would appear to be germane to reflexive modernity. The late-modern position adopted here is closer to that of Anthony Giddens (Beck, Giddens, Lash 1994) who defines reflexivity with reference to reflection, then to Beck (1994) who attempts to separate the two concepts. While this thesis asserts a late-modern, rather than post-modern, perspective the similarities between these accounts are also acknowledged. Post-modern analysis, particularly the work of Bauman, has informed the analysis presented here.

Post-modern theory needs to be understood in relationship with the modern. It provides a critique of the Enlightenment modernity. Post-modernism challenges the values and assumptions of modernity represented in the Enlightenment (Bauman 1995). However, there is a long-standing tradition of critical reflection and enquiry; many of the post-modern arguments are not particularly 'new', they can be traced to Nietzsche, Heidegger, Weber, Adorno, Simmel. Post-modernism is not therefore defined as simply a period of time 'after the modern'. It is more a critique of the modern, a part of the modern. Bauman takes this approach and suggests post-modernism represents a critique of the modern in the form of

the modern mind taking a long, attentive and sober look at itself ...
   as modernity coming of age .... a self-monitoring modernity. 
(Bauman 1991:272)

For Bauman (1995) scepticism about all embracing theories, the 'grand-narratives', is a key theme in post modernism. Lyotard also argued that the;

grand-narrative has lost its credibility, regardless of what mode
   of unification it uses, regardless of whether it is speculative
   narrative or a narrative of emancipation. (in Smart 1996:404)
Lyotard suggested that the post-modern approach may have been around a long time, but has become much more significant since World War II. The main focus of Lyotard's attack is the grand-narratives of modernity, especially those that invoke a "future to be accomplished" an "idea to be realised". (Smart 1996:405). The consequences of grand-narratives, as all embracing ideologies, are evident in the experience of Soviet style Communism, Fascism and the Holocaust. The recurring crisis of laissez-faire economic liberalism is said to invalidate the grand-narrative of Capitalism and according to Lyotard, its social democratic "post-Keynesian modifications". (Smart 1996:406). For Lyotard these examples of grand-narratives provide a critique of the march of progress.

There are parallels between post-modernism and the theories of Beck (1992) and Giddens (1990) on reflexive modernisation. Although unlike post-modernism, reflexive modernisation theorists do not abandon techno-scientific development; they advocate sceptical engagement with science rather than its rejection. The advocacy of a more sceptical reflexive engagement with science has led some post modern authors to label reflexive modernisation as new modernism. Beck has been criticised for suggesting "everything has become controllable, the product of human efforts, the age of excuses is over (Smart 1996:407). This, Smart suggests, recycles the myths of modernity. It simply puts faith back in science, progress and universalism. He argues that science has lost authority, lacks credibility and answers. Whereas For Beck science remains as source of possible solutions. Despite these differences, both the post-modern and reflexive modern positions emphases the concept of reflexivity.

The post-modern position of Bauman (1991) celebrates difference, diversity and pluralism in contrast to universalism. It advocates a politics of tolerance, diversity and justice. Post-modernism for Lyotard is critical of the failed promise of the Enlightenment. Instead of progress, freedom from ignorance, poverty and despotism, modernity has created:
the possibility of total war, totalitarianism, the growing gap between the wealth of the North and impoverished South, unemployment and the ‘new poor’, general deculturation and the crisis in education. (Lytard 1992:98).

The above quote suggests despair with the ethical outcomes of modernity. Smart argues post-modernism represents a radical reflexive challenge to received ideas, forms and assumptions. It is therefore a critique of the modern although “it undoubtedly constitutes a part of the modern” (Smart 1996:422). Smart gives short shrift to “a banal notion of the post-modern superseding or transcending the modern” (Smart 1996:422).

Post-modernism rejects any claims to universal knowledge. It claims to have cracked old certainties and exposed their assumptions. Reflection once again is central to the critique.

With the application of the powers of reflection to the process of modern reflection itself the old certainties have indeed collapsed. (Smart 1996:423).

Smart asserts that post-modernism does not mean the end of theory or politics, but suggests a more reflexive form of both, a position again close to that of Giddens and Beck who talk of reflexive modernisation rather than post-modernism. Smart advocates a post-modern theory and politics built on a reflexive process of interpretation and re-interpretation; one that acknowledges pluralism as part of a post-modern habitat. If post-modernism is better described as an archaeology of modernity, this immediately begs the question of who are the architects of tomorrow? How do we move forward from a post-modern analysis? How do we improve the quality of life without science and technology? A reflexive modern position would suggest through critical, sceptical engagement with science and technology. In treating all products of the Enlightenment simply as narrative even the post-modernist Lyotard has since reflected on narratives as ‘stories’:

I exaggerated the importance given to the narrative genre. ... Specifically, I went too far in identifying knowledge with narrative. ... Scientific theory, on the other hand, does not as a rule claim to be narrative.... (Lytard 1992:31)
It is the hegemony of the grand-narrative that Lyotard challenges. He argues of the grand-narrative:

The decline does not stop countless other stories (minor and not so minor) from continuing to weave the fabric of everyday life. (Lyotard 1992:31)

Is this a step closer to Enlightenment principles and therefore perhaps the reflexive modern position of Beck and Giddens?

**Reflexivity**

The emergence of scepticism as a central theme in the contemporary critique of modernity is reminiscent of the Enlightenment. In the 18th century David Hume started out believing that empiricism and science provided a pathway to truth, yet his theory of causation eventually produced extreme scepticism. As Russell noted of Hume "so he ended, however, with the conviction that belief is never rational, since we know nothing." (1961:644). That the contemporary critique of the Enlightenment should cherish such key Enlightenment themes as scepticism suggests that there has not been a complete break with the modernity. This point is explicitly acknowledged by Ulrich Beck, the author of 'Risk Society' (1992).

To me, Enlightenment is not an historical notion and set of ideas, but a process and dynamic where criticism, self-criticism, irony and humanity play a central role (the theme of my current research). Where for many philosophers and sociologists 'rationality' means 'discourse' and 'cultural relativism', my notions of 'reflexive modernity' implies that we do not have enough reason. (Beck 1999:152).

This position has predictably led to the criticism that Beck is neo-modernist (Lash 1996). Beck provided a perspective that seeks to connect with Enlightenment reason, although with the benefit of 300 years of hindsight. Beck described reflexivity in science as a process where science turns its gaze upon itself, where it is much more self critical and cautious in its proclamations.
We've set reflexive modernisation, public risk consciousness and risk conflicts would lead to forms of scientization of the protest against the science... In short, in the course of scientization of the protest against science, science forces itself to run its own gauntlet. (Beck 1992:161).

Science for Beck has a central role in the scrutiny and policing of scientific processes and outcomes. A position that, as will be argued later, contrasts the reflexive modern approach of Beck and Giddens, to other critiques such as post-modernism. In connecting reflexivity to a scientific method, Beck uses the concept of reflexivity in a similar way to Gouldner (1972). In arguing for a more reflexive sociology, Gouldner was conscious of the way in which relationships of power can distort the sociological quest for knowledge. He argued, “All powers that be are inimical to the highest ideals of sociology” (Gouldner 1972:499). The reflexive sociology to which Gouldner aspired was critical, and self consciously aware of limitations imposed by context. Gouldner did not believe that such barriers to understanding were insurmountable.

For surely men may be led to truth no less than to falsehood by their socially shaped personal experiences in the world. Indeed there is no other way in which they can approach truth. Surely truth no less than error, must be born of social experience. (Gouldner 1972:482).

Gouldner had attracted criticism for his response to those sources of sociological or epistemological distortion. He presented an individualised account of how sociologists should behave if they are to avoid being corrupted by power or individual career opportunism. Gouldner is particularly scathing about career sociologists whose pursuit of individual aggrandisement takes them further from the path of sociological understanding.

The focus of Gouldner’s reflexive sociology tends to fall on particular factors ‘internal’ to the sociologist – on the need to cultivate ‘new sensitivities’ and raise ‘self-awareness’ – rather than on organisational features and conventional practices of intellectual sub-culture. (Smart 1999:81).
However, despite the emphasis given by Beck to individualisation, he talks of reflexive society not simply individual action or as Beck would have it “do-it yourself biography” (Beck 1994 p15). He appears to distance reflexivity from reflection and individual action. Reflexivity for him is linked to structural transitions, it is autonomous and beyond the control of individual action. Risk society and the congruent reflexivity is an unforeseen effect of modernisation. The suggestion that it is in some way automated and beyond the realms of reflection represents a potential challenge to the theoretical framework of this thesis which seeks to directly relate reflexivity in social theory to reflection in educational discourse. Beck's account therefore, needs to be examined in more detail. In making the distinction between reflection and reflexivity Beck has distanced himself from other reflexivity theorists and according to Smart (1999:76) unsuccessfully amended his earlier position.

**Beck's reflexivity**

The nexus between the concepts of reflection and reflexivity is a central theme of this thesis, which attempts to link developments in social theory to educational practice. It argues that reflective learning within lifelong education is an important aspect of education for reflexive modernisation or late-modernity. Yet Beck takes issue with the idea of reducing the concept of reflexivity to that of reflection. In "reflexive modernisation" (1994) he challenges the other key theorists, Anthony Giddens and Scott Lash, and argues that reflexivity is not to be confused simply with reflection. Beck describes such a reduction of reflexivity to reflection as a “fundamental misunderstanding” (Beck 1994:5). Beck's objection is that the comparison suggests that reflexivity is an option rather than a social condition. In Beck's account, reflexivity is not something reached by people being more contemplative and thoughtful in their interaction with the social world. For him, reflexive modernisation simply forces people to confront the effects of risk society and the consequent threats to the foundations of industrial society. These risks include the accompanying risks of nuclear, chemical, genetic, and military technologies as well as impoverishment in the non-
western world. Beck's use of reflexivity is specific to a transitory period of modernisation:

Let us call the autonomous undesired and unseen transition from industrial to risk society reflexivity (to differentiate it from and contrast it with reflection). ... The fact that this very constellation may later, in the second stage, in turn become the object of the old (public, political and scientific) reflection must not obscure the unreflected, quasi-autonomous mechanism of the transition: it is precisely abstraction which produces and gives reality to risk society. (Beck 1994:6).

This quote contradicts Beck's assertion elsewhere that there is no possible connection between reflection and reflexivity; it confirms the possibilities for more reflection as a consequence of reflexive modernisation. He clearly does not see reflection, though desirable, as a precondition of reflexivity or an inevitable consequence. The above quote suggests that despite his assertions (quoted earlier) his position does not conflict with the theme of this thesis. That theme is the need to nurture reflection, through education, as a means of responding to reflexive modernisation. Beck clearly attempted to separate the concept of reflexivity from that of reflection. Yet the desire for a more reflective modernity is also evident in Beck:

In the risk society, the recognition of the unpredictability of the threat provoked by techno-industrial development necessitate self-reflection on the foundations of social cohesion and the examination of prevailing conventions and foundations of rationality." (Beck 1994:8).

The voice of reflection is evident in his account of reflexive modernisation, he talked of a "multiple-voiced self-criticism of society. ... In other words, risk society is by tendency also a self-critical society." (Beck 1994:10-11). The demise of Marxism has for Beck produced favourable conditions for radical criticism and social critique. The radical criticism he attributes to risk society educationalists might connect to reflection in learning. Yet Beck clearly has a more narrow conceptualisation of reflection than that which can be found in education. He seems to limit reflection to knowledge. In his response to Scott Lash, he argued that Lash was mistaken to connect reflexivity to reflection: "Here he confuses reflection (knowledge) with reflexivity (self-
application)." (Beck 1994 p32). This reduction of reflection to knowledge that is somehow detached from human action and self-application is curious. Reflection from Dewey through to Freire, Kolb, Schon and Jarvis (Jarvis 1995) is essentially about the self-application of thought to experience as a means of gaining knowledge. The separation of reflexivity and reflection that can be found in Beck does not appear to be a separation of reflection as conceptualised in education.

On reading Beck's Risk Society, the theme of human action is evident. This may take the form of individuals being confronted with new information, threats or risks and acting in response to them. It might include individuals constructing their own biography in a manner that is less influenced by tradition. As Beck argued “Individualization therefore means that a standard biography becomes a chosen biography, a do-it-yourself biography, or, as Giddens put it, “a reflexive biography." (Beck 1994:15). The process of people being confronted with new information, thinking and acting, often in radically different ways to tradition, has parallels with the process of reflective learning. Yet Beck also appears to play down the link between reflection and reflexivity in a way not shared by other key theorists of reflexive modernization (Giddens and Lash 1994). As the above discussion illustrates, Beck acknowledged that more reflection maybe a consequence of reflexive modernisation, but is not the catalyst for it. Furthermore, his understanding of reflection reduced it to simple knowledge that appeared to be separated from self-application. Is this a reification of knowledge? Whatever, it is not a definition of reflection as understood in educational literature (Jarvis 1992, 1995). In educational terms, knowledge can be derived from the transformation of experience by such activity as thinking and reflection. If one takes this approach to reflection, Beck’s challenge that reflexivity is entirely separate from reflection is less convincing.

Other key theorists of reflexive modernization make an explicit link between reflection and reflexivity. It can be demonstrated that the language of reflexivity has a strong resonance with that of reflectivity in learning (Kolb
Indeed when interviewed, Giddens quite explicitly defined reflexivity in terms of reflection:

I use it to mean just the generic fact that we are reasoning beings who reflect on the conditions of our activity, and that all human beings are like that; but I also use it in the sense of social reflexivity or institutional reflexivity, ... essentially a world where you have constant or organised reflection on the conditions of our existence as a means of living those conditions. (Chignall 1995:11).

It is Giddens’ approach to reflexivity that is used here. In education this “reflexive monitoring of action” is referred to as a “basis for reflective learning” (Jarvis 1992:37). Lash and Urry also refer to the critical reflection of individuals in their account of reflexivity (1994:32). Reflexivity and reflection are therefore at the heart of the theoretical approaches that described new forms of modernity (Beck 1992, Giddens 1991, Lash and Urry 1994). The concept of reflexivity is central to sociological and economic accounts of late-modernity and has strong parallels with the concept of reflective learning. At an IPPR conference Beck clearly argued that freedom of information and education for uncertainty is central to the democratisation of risk society (IPPR 1996). Such education for uncertainty is best expressed through reflective learning: lifelong reflective learning that enables individuals, organisations and communities to navigate their way through late-modernity. A Risk Society forces people to make decisions in the light of changing information it therefore needs to nurture reflective learning.

It has been argued that Beck is out of step with other reflexive theorists, the educational literature on reflection and other aspects in his own writing. Smart provided a critical evaluation of Beck’s thesis and concluded:

The forced distinction between reflexivity and reflection is ultimately analytically unnecessary, for as explanations of the consequences of the reflexivity and ambivalence of modernity, offered by Giddens and Bauman respectively, already make clear, the institutions of modernity are destined to continually defy our attempts to exercise control. (Smart 1999:77).
Why did Beck then amend his earlier position and force the distinction? Barry Smart (1999) offered a plausible explanation. In calling for a more reflexive science, scientization of science, Beck appeared to suggest that the Enlightenment project is not finished. For Beck, science needed to be rationalised to become more sceptical, self-critical, perhaps more Popperian, willing to falsify its theories: "Reflexive scientization is promoted as promising a regeneration of the Enlightenment project of modernity, as offering a revival of reason ..." (Smart 1999:73). Yet the values of self criticism are an existing foundation of modern science. Scientists lavish praise and tributes on the philosophy of science provided by Karl Popper "There is no more to science than its method, and there is no more to its method than Popper has said" (Magee 1985:9). There is an optimism and confidence in Beck that science can be part of a solution to the manufactured risk and not simply the essence of the problem; that somehow science will help us regain control and minimise the consequences of the risks it has created. At the heart of both Gidden's and Bauman's analysis there is profound doubt that it is possible to control the consequences of modernity. Smart (1999:76) argued that in response to the criticism of Beck, implicit in Giddens and Bauman, Beck unnecessarily forced a distinction between reflexivity and reflection. In a later book Beck (1994) amended his position and suggested we live in an automatic reflexive period of modernisation that might be later followed by a more reflective form of modernity. For Smart (1999) this distinction between reflexivity appears misplaced and unnecessary if one can accept the ambivalence of modernity evident in Bauman (1991).

In the foreword to Risk Society, Lash suggested that Beck's theory of reflexive modernization could provide a basis of rejecting Habermas's essentially Enlightenment project (Beck 1992:2). Yet on the last pages of Risk Society Beck's democratic aspirations have echoes of Habermas's ideal speech-situations and a call for more reflection. Beck argued for a need for space for self-criticism, the need to "engage in controversial and alternative discussions ... not only in intra-disciplinary circles, but also in inter-disciplinary partial public spheres ..." (Beck 1992:235). It is through critical
reflection, or to use Beck's term self-criticism, that the dangers of Risk Society can be minimised and controlled. He explicitly acknowledged Popper's influence and argued "Enabling self-criticism in all its forms is not some sort of danger, but probably the only way that the mistakes that would sooner or later destroy our world can be detected in advance." (Beck 1992:234). This belief that we can control what Giddens (1990) called the 'juggernaut of modernity' lies at the heart of Smart's (1999) critique of Beck. Smart suggested that Beck is wedded to the Enlightenment values, but Beck fails to inform the reader how to judge which self-criticism should inform our decisions. He differs from Giddens who argued that the Enlightenment had "not produced a world subject to our prediction and control" (Giddens 1990 p151). Yet, as illustrated above, Giddens' account of reflexivity includes reflection without conceptual contortions or guarantees that we can control the consequences of modernity. The position of Giddens is close to that of Bauman who argued that:

> The post-modern condition does not differ at all from all other conditions; it differs only by knowing about it, by its knowledge of living without guarantees, of being on its own. (1991:256)

> Post-modernity is a site of opportunity and a site of danger; and it is both for the same set of reasons. (1991:262).

The most that Giddens seems to offer in his future orientations is the prospect for reflexivity and reflection to "envisage alternative futures whose very propagation might help them be realised" (Giddens 1990:154). Does this suggest, like Beck and Habermas, that a self-critical or reflective discourse (be it an ideal speech-situation or Popperian science) is an essential dynamic for change?

**Bourdieu and Reflexivity**

Beck's aspiration for a more reflexive science can be compared to the reflexivity of Bourdieu, whose approach to sociology has been described as essentially reflexive. Wacquant argued "If there is a single feature that makes
Bourdieu stand out in the landscape of contemporary social theory, it is his signature obsession with reflexivity” (Bourdieu and Wacquant 1992:36). Bourdieu is wedded at one level to scientific aspirations “it follows that sociology must be a total science. It must construct total social facts” (Bourdieu 1992 p26). He argued for the need to erode the barriers between theory and empirical research if we are to “grasp a truth …” (Bourdieu 1992:28). The use of the phrase “a truth” rather than ‘the truth’ illustrated that Bourdieu tends to view knowledge as contingent. However, the use of the term ‘social facts’ raises questions about deterministic views of humanity. Bourdieu has used empirical research to establish a reality to gain knowledge of social relationships. These relationships can limit choice and freedom of action but only, according to Bourdieu, if we are unaware that such relationships exist. In response to a question that social laws are deterministic he argued “On the contrary, it brings to light the possibility of choice that is implied in every relationship of the type ‘if X then Y’, the freedom that consists in choosing to accept or refuse the ‘if’.” (Bourdieu 1993 p25). It follows that, for Bourdieu, we can only challenge patterns of social behaviour and social relationships if we know what they are. Knowledge, or information, about the social world is essential for social action, but not in any deterministic sense. Bourdieu argued that theory that is not reflexive and unable to respond to, or be located in, practice (practice discovered through reflexive research) is completely vacuous. Wacquant uses Rational Action Theory to illustrate this point.

To apply to practice a mode of thinking which presupposes the bracketing of practical necessity and the use of instruments of thought constructed against practice … is to forbid ourselves from understanding practice as such. The epitome of this intellectualist fallacy is represented by Rational Action Theory … which reifies its hyperrationalistic models of action and injects them into the minds of agents, thereby foreclosing an investigation of the actual practical rationality imminent in their conduct. (Bourdieu and Wacquant 1992: 40)
A more reflexive approach to research would presumably avoid projecting the theoretician's reality into the habitus of the agent. Bourdieu's reflexivity is concerned with epistemology "the idea of reflexivity as a requirement and form of sociological work" (Bourdieu and Wacquant 1992:38). Bourdieu's approach to theory and method extends to all scientific practice, he is essentially arguing for a more reflexive science as a key to scientific progress (Smart 1999:83). Smart (1999) rightly draws out parallels in the work of Bourdieu and Beck in their shared assumption "that modernity is ultimately capable of putting itself to rights." (Smart 1999:84). In this respect both Beck and Bourdieu can be compared to Habermas who "wants to offer a vindication of the Enlightenment and modernity when for many these have become discredited" (Giddens 1996:175). This approach can be contrasted with Giddens and Bauman both of whom present a more ambivalent response to modernity.

**Giddens and Reflexivity**

As noted above Anthony Giddens explicitly connects the concepts of reflection and reflexivity. The parallels with reflective learning will become clear in Chapter Three and can be drawn from Giddens' definition of reflexivity.

Reflexivity hence should be understood not merely as 'self-consciousness but as the monitored character of the ongoing flow of social life. To be human is to be a purposive agent, who both has reasons for his or her activities and is able, if asked, to elaborate discursively upon those reasons (including lying about them). ... Thus it is useful to speak of reflexivity as grounded in the continuous monitoring of action which human beings display and expect others to display. (Giddens in Cassell 1993:90).

A key aspect of Giddens' approach to reflexivity is that people reflect and review their actions in the light of new information. In a late-modernity which is characterised as a period of rapid and widespread change, reflexivity and reflection become much more pertinent, more powerful - they are part of the dynamic of change. As Giddens' argued "Modernity's reflexivity refers to the susceptibility of most aspects of social activity, and material relations with
nature, to chronic revision in the light of new information or knowledge.” (Giddens 1991:20). The consequential implications of such continuous reflexive monitoring of action challenges the Enlightenment search for universal truths and laws. Reflexivity undermines any belief in the certainty of knowledge. Knowledge for all becomes regarded as contingent, open to revision in the light of changing information.

In times of rapid and widespread change tradition and past experience cannot be relied on to guide actions in the present, to let people know how to go on. “The reflexivity of modern social life consists in the fact that social practices are constantly examined and reformed in the light of incoming information about those very practices, thus constitutively altering their character.” (Giddens 1990:38). Giddens points out that this can be unsettling for all as it erodes the comfort gained by a certainty of knowledge or “ontological security” (Giddens 1991:243). The Enlightenment promise of certain knowledge is undermined by awareness that any knowledge may be revised.

In science, nothing is certain, and nothing can be proved, even if scientific endeavour provides us with the most dependable information about the world to which we can aspire. (Giddens 1990:39)

This conclusion captures part of the critique of the Enlightenment so characteristic of contemporary social theory. Paradoxically the above conclusion was evident in Enlightenment thinking itself, as is illustrated in chapter one, it is a view that can be found in the philosophy of David Hume. The emphasis on the self monitoring of action, of individual agency is one aspect of reflexivity evident in Giddens' account. He also argued that the social sciences in particular contribute to the reflexive nature of modernity. The social sciences, as part of the world they seek to explain and understand, unavoidably influence that world. Giddens referred to the process whereby social science interpretations of social action come to define social action for the actors themselves the “double hermeneutic” (Cassell 1993:152). A metaphor used by Bauman (1991:213) illustrates this point: sociology could be viewed as an eddy, in a much broader social
stream, one that temporarily captures some social action and in doing so alters and shapes part of the overall flow. Giddens argued “Social science tends to ‘disappear into the environment it is about ... [and] has a very powerful impact upon the very constitution of that environment” (Bordieu and Wacquant 1992:37 footnote). That social actors respond and alter their behaviour in the light of new information, including information from social science, demonstrates a connection between reflexivity and learning, a nexus explicitly acknowledged by Giddens and accepted here.

Modern societies together with the organisations that compose and straddle them, are like learning machines, imbibing information in order to regularise their mastery of themselves. Because of the perversity of unintended consequences, and the very contingency of social change, we may presume that such mastery will always be less than complete. Yet upon our capabilities for social learning, in a world that is the legacy of modernity, we predict our future. (Cassell 1993:152).

More recently Giddens has emphasised the way in which these processes, in which the social sciences are but one small part, have provided for a more reflexive society or reflexive modernisation (Giddens 1990:38). In ‘Modernity and Self Identity’ (1991) Giddens provided examples of reflexivity by examining the growth and impact of self help literature that shapes decision making in many aspects of social life. New information or ‘facts’ about any aspect of social activity be it related to health, family, work, education or leisure could transform the way people organise their lives. “Such information or knowledge is not incidental to modern institutions, but constitutive of them “ (Giddens 1991:20).

**Making more knowledgeable decisions**

Smart (1999) detects a difference in the response to modernity that can be found in the reflexivity theorists. Broadly speaking Beck and Bourdieu are relatively optimistic and wedded to Enlightenment ideas that human action can shape the course of history for the better. Giddens and Bauman on the other hand are more pessimistic, more ambivalent; they put more emphasis on unintended consequences of action and suggest that modernity is not
subject to prediction and control. If an author's position in relation to the Enlightenment provides a frame of reference then the differences between Giddens and the 'optimists' may not be that great. Giddens provided a defence of sociology (1996) that does not completely abandon Enlightenment thinking.

Should we therefore perhaps accept, as some of the post-modernists say, that Enlightenment has exhausted itself and that we have more or less to take the world as it is, with all its barbarities and limitations? Surely not. Almost the last thing we need now is a sort of 'new medievalism', a confession of impotence in the face of forces larger than ourselves. ... The possibility of, even the necessity for, radical politics has not died along with all else that has fallen away. (Giddens 1996:227)

Richard Rorty (1999) expresses similar conclusions to those of Giddens. The post-modernist position that there is an "absence of secure foundations for knowledge" (Smart 1999:38) is not shared by Giddens. Here there are clear parallels between Giddens' approach to sociology and Bourdieu's. Both Bourdieu and Giddens recognised value in exploring developments and trends in social action, Giddens argued against post-modernism "Let us first of all dismiss as unworthy of serious intellectual consideration the idea that no systematic knowledge of human action or trends of social development are possible." (1990:46-47).

Zygmunt Bauman clearly asserted a post-modern perspective and was much more critical of the veil woven by Enlightenment values. In a section headed the "veil pierced" (Bauman 1995:24) he argued "Chaos and contingency, which were to be chased away beyond the borders of societal islands of rational order, are back with a vengeance; they rule inside what was meant and hoped to be the safe house of Reason." (Bauman 1995:24). Bauman advocates an approach to social inquiry that refers to values not laws, assumptions not grounds and purposes not groundings (1991:108). Bauman’s approach suggests that intellectual activity, especially in the social sciences, should abandon legislative ambitions, truth claims that dictate universal practice, and be limited to interpretation that facilitates
understanding of difference. In place of the search for universal ‘laws' the aims of such post-modern interpretation include the recognition, celebration, and defence diversity.

The post-modern eye (that is, the modern eye liberated from modern fears and inhibitions) views difference with zest and glee: difference is beautiful and no less good for that" (Bauman 1991:255).

Survival in the world of contingency and diversity is possible only if each difference recognises another difference as the necessary condition of the preservation of its own. Solidarity, unlike tolerance, its weaker version, means a readiness to fight: and join battle for the sake of the other’s difference, not one's own. (Bauman 1991:256)

The second of the above quotes relates to a desire for interpretation and understanding to translate into action that which improves the quality of life. For Bauman's sociological insight can provide:

knowledge which is likely to enhance the prospects of increasing the sphere of autonomy and solidarity available to individuals, ... In short knowledge to facilitate the possibility of reason-led forms of reflexivity which may allow subjects to recognise the ‘self is not given to us” (Smart 1999 p29).

With the risk of attracting criticism that I am burying differences and seeking to impose a unifying modernist interpretation, I would argue that there exists some common ground in the above theorists. All obviously emphasise the reflexive nature of contemporary modernity; though they possess different orientations to modernity and use different descriptors (late-modern, reflexive modern and post-modern). Equally all advocate a more reflective self-critical engagement with modernity that may positively impact on the quality of life, a theme that would appear to unite diverse social theorists. A form of reflective and critical engagement with modernity and a view to improving it is evident in the modernist Habermas, neo-modernist Beck, late-modernist Giddens and the post-modernist Lyotard. Smart contrasts Lyotard’s response to the contemporary condition of modernity to that of Beck's.
The modern world of growing complexity depicted by Lyotard is more one to which we are subject, rather than one over which we can exercise much control, but there nevertheless seems to remain a remote possibility that a democratization of access to information and knowledge, or a demonopolization of expertise, might offer a basis for critical reflection and for 'making knowledgeable decisions' (Smart 1999:79).

Thus, even with the post-modernist Lyotard there is cautious optimism that knowledgeable decisions, gained through critical reflection, are possible and desirable. In his analysis of "Work, consumerism and the new poor" (Bauman 1998) the analysis utilises diverse forms of theoretical commentary and empirical evidence to ask penetrating questions and offer alternative forms of collective action. The method of enquiry is distinctly sociological, and the suggestion of alternative praxis is similar to that which could be found in Habermas, Bourdieu or many other social theorists.

There exists tension between theorists who argue there is no universal and secure foundation for knowledge and those who seek to improve the quality of life. The post-modernism of Lyotard has been referred to as "... a nihilistic rejection of all forms of political belief and commitment" (Kumar 1995:180). Habermas (1987) argued that post-modernism heralded a neo-conservatism, whereby the relativism of Post-modernism neuters any meta-narrative for emancipation. The thrust of Habermas's claim that thinkers like Foucault, Deleuze and Lyotard are "neo-conservative" is that they offer us no "theoretical" reason to move in one social direction rather than another." (Rorty 1994:168)

Whether or not emancipation requires a meta-narrative or simply local narratives is open to question (the late-modern perspective presented in this thesis is built upon a level of meta-narrative; derived from the Enlightenment and reflexive modern thinking. Richard Rorty provided an analysis that seeks to split the differences between the relativism of Lyotard and critical theory of Habermas. Rorty takes a philosophically pragmatic position, he acknowledges diversity, but argues diversity should not prevent one group from seeking their idea of progress and seeking to persuade others; a persuasion governed by free and open encounters that give primacy to the
idea of tolerance (Kumar 1995: 180). Rorty's approach has similarities with Habermas's ideal speech situation. Though Rorty has been labelled as a Post-modernist (Kumar 1995:179), his philosophy is consistent with the late-modern perspective adopted here. His synthesis of the positions adopted by Habermas and Lyotard is steeped in Enlightenment tradition and the views of philosophers of education like Francis Bacon and John Dewey. In Rorty there is a clear problem solving orientation and pragmatism counterpoised to subjectivity: "Had Bacon - the prophet of self-assertion, as opposed to self-grounding - been taken more seriously, we might not have been stuck with a canon of "great modern philosophers" who took 'subjectivity as their theme". (Rorty 1994:167). Rorty argued that philosophy should focus on clear and distinct ideas that can make a difference to the success or failure of communities. These themes are concerned with progress and the human endeavour to have a positive impact on the world through imaginative ideas and practice, Rorty quotes Dewey as a summary of his position:

When philosophy shall have co-operated with the force of events and made clear and coherent the meaning of the daily detail, science and emotion will interpenetrate, practice and imagination will embrace. (Rorty 1994:170)

As with other aspects of the post-modern critique, with Rorty, the journey through modernity to the contemporary critiques of modernity returns to the Enlightenment themes outlined in Chapter Two. As with Bauman's acknowledgement of Kant in "Post-Modern Ethics" (1993:49), Rorty's approach recognised the value of Bacon's philosophy. Enlightenment thinking clearly has something to offer contemporary critiques and thereby suggests we live in a state of late-modernity rather than post-modernity. This is not to suggest that understanding is simply located in history or the "Wisdom of the Ancients" (Bacon 1625), but to acknowledge learning from experience and the experience of others (Jarvis 1992). The contemporary critique of modernity would appear to fit Bacon's suggestion that it is the modern who are the ancients because we have the benefit of time, a longer history and reservoir of experience from which to make our judgements (Kumar 1995:76).
A pragmatic, grounded response to reflexive modernisation is attempted in Part Two of this thesis which seeks to translate the theoretical implications outlined in the introductory chapters to case studies of action research in classroom practice. The thesis attempts to demonstrate the centrality of reflexivity in late-modernity and a need for education to nurture more critical reflection. Reflective learning, in nurturing more reflective self-critical enquiry, may at the very least facilitate 'more knowledgeable decisions'. The different varieties of social theory sketched above all recognise the importance of reflexivity and its connection at some level with critical reflection. How critical reflection can be facilitated through reflective learning is the subject of later chapters. The task here was to demonstrate how reflexivity and critical reflection provide central reference points for a late-modern analysis.

One other theme which unites the above theorists, be they labelled modern, post-modern or late-modern is that they all are entwined in a relationship with the Enlightenment and eighteenth century philosophies. This chapter has sketched some of the Enlightenment themes as a point of criticism, departure or comparison for contemporary social theory. The late-modern perspective adopted in this thesis does not advocate a structural break with Enlightenment thinking. Instead it seeks a perspective that stands on the shoulders of past experience. It notes that many of the themes claimed as critical of Enlightenment thinking were evident in the Enlightenment itself.

A theme of Enlightenment philosophies, that can be traced from Bacon through to Kant, is that we learn through reflection on experience. That such reflection would produce progress for humankind was very much a hope or belief of Enlightenment thinking. It could be said that modernity started with a search for certainties and has resulted in more critical reflection with the "institutionalisation of doubt" (Giddens 1990:176). Many of the contemporary social theorists discussed above are also concerned with constructing a better future. In these theories there is a self conscious acknowledgement of reflexivity; that the way we describe the world both influences that environment and is in turn reshaped by it.
Anticipations of the future become part of the present, thereby rebounding upon how the future actually develops; utopian realism combines the "opening of windows" upon the future with the analysis of ongoing institutional trends whereby political futures are immanent in the present. (Giddens 1990:178)

Learning through reflection of experience is a theme that can be found in the origins of modernity it also flows into the whirl of contemporary social theory; a feature of reflexive modernisation. Even Beck (1994) who attempts to force a distinction between reflection and reflexivity hopes that more critical reflection will be an outcome of reflexive modernity (Beck 1992:234, 1994:6). An emancipatory agenda can also be found in reflective learning theorists, for many of these writers reflective learning can contribute towards a greater good. The following chapters explore the reflexivity and reflective learning in education. It is argued that reflective learning can provide a form of reflexive education in late-modernity.
Chapter Three: Reflective Learning As A Reflexive Education in Late-modernity

Chapters one and two of the thesis explored the social and philosophical context. This chapter explores reflexive education and connects it to reflective learning. It examines reflexive modern and post-modern accounts in literature on education. The chapter asks whether reflective learning in post-compulsory education corresponds with the needs of contemporary modernity. Having established a contextual and theoretical foundation for reflexive education the remainder of the thesis will provide examples of the theory applied in research and the educational practice. Contemporary social theory provides a number of insights and perspectives on the developments of western modernity. The concept of reflexivity is central to contemporary accounts of modernity. If education is to meet the needs of individuals in a more reflexive society it must provide a more reflexive form of education and learning.

In a period of change, all are forced to reflect on new information, to reassess their experience and knowledge of what had previously been taken for granted. If information is the catalyst to such reflection, education becomes a key to transforming it into knowledge that can be acted upon. Education in the form of reflective learning has a central role in enabling people to meet the demands of living in a “Risk Society” and period of "Reflexive Modernisation" (Beck, Giddens, Lash 1994). Reflexive learning as a form of reflexive education is ambivalent; it contains within it the same potentials for emancipation and control as do other aspects of education.

It is possible to present an economic case for a more ‘enlightened’ empowering form of education. It may be that these economic arguments, (Lash and Urry 1994), provide a justification for some form of reflexive learning, but once this is accepted relationships of power enter the debate. If reflexive learning is promoted or encouraged by those with power, it is likely to be for reasons connected to control and the preservation of current socio-
economic relations. Consequently the paradoxical history of education as both a source of empowerment and control is likely to continue with or without more reflexive learning.

Educational change is essential to economic competitiveness under the conditions of reflexive accumulation (Lash and Urry 1994) and at the same time education is a potential source of the radicalisation of modernity (Beck 1992, 1994). However, current forms of vocational education and training in the UK do not correspond with the requirements of reflexive accumulation, rather they represent Fordist models of vocationalism in a post-Fordist world (Dyke 1996). It is argued here that education and training must provide for reflective learning in order to meet both the needs of reflexive modernisation and the intellectual demands of more reflexive students. The hope that reflexive education and reflective learning will meet these needs and contribute to democratisation is held here, but it remains a hope, or a bias of the author, rather than an assertion of cause and effect. It is not suggested that reflective or reflexive education will automatically provide for empowerment. The unintended consequences, complexity and relationships of power and control are also acknowledged and discussed below.

**A history of education as empowerment and control.**

Concern about the relationship between education and work has been a central theme throughout the history of education. Williams (1961) noted that the first English schools in the sixth century and early universities were essentially vocational, their primary objective being the training of priests.

> The conscious object of these early schools, attached to cathedrals and to monasteries, was to train intending priests and monks to conduct and understand the services of the Church, and to read the Bible and the writings of the Christian Fathers. (Williams 1961:128)

Williams suggests that having taught people to read with the sole purpose of creating the capability to preach from the Bible, the Church soon began to fear that it could not control what else students read. Until the Renaissance the Church maintained hegemony through the distinction it made between
For several centuries ... the distinction between improving Christian authors and distracting or debasing pagan authors was repeatedly urged." (Williams 1961:158). This early conflict in the effects of education reveals an enduring ambiguity, a ‘Paradox of Learning’ (Jarvis 1992): a paradox whereby education is considered a threat to the prevailing power structure yet essential to its reproduction and development. The acknowledgement of the contradictory nature of education also permeates the conceptual framework of Ettore Gelpi; his approach to lifelong education is summarised by Griffin:

Lifelong education is not one option but many: in societies of whatever ideological order its potential is both for liberation and repression: it is at the same time both progressive and reactionary. (Griffin 1987:284-5).

Those with power will seek to expand education to promote and protect their interests, yet the relative autonomy of education ensures that its liberating aspects are likely to shine through: for Gelpi education is “composed of both control and creativity” (Griffin 1987:286). While connected to the economic structures and control, it retains opportunities for empowerment.

The paradox is apparent throughout the history of education. Williams illustrated the point by citing the comments of a Justice of the Peace in 1807, who argued that while it was desirable to teach the poor to read as it would enable them to read the Scriptures, he had reservations about extending their learning because:

... as to writing and arithmetic, it may be apprehended that such a degree of knowledge would produce in them a disrelish for the laborious occupations in life. (Williams 1961:135).

The perceived relationship between education and future economic prosperity has been a key determinant in the development of English State education. Throughout the nineteenth century there was a growing demand for a national education system. Green argues (1991) that this demand gained impetus in the 1860s as a consequence of fears that European competitors would have a better educated workforce. In 1870 the Forster
Education Act introduced State elementary education in England and Wales. Both Green (1991) and Williams (1961) argue that the principle reason for the Forster Act was economic. Mass education was introduced in the UK as a means of maintaining economic competitiveness in Europe.

Early socio-economic theories, with their roots in the Enlightenment (Hall 1992), recognise a nexus between the needs of economy and role of education. The above examples reveal an ideological bias consistent with references to base and superstructure found in Marxian social theory (Williams 1973, Brosio 1988). Analysis associated with the right wing economics reached similar conclusions; classical laissez-faire economics presented a view of education as a form of investment in people that would produce future income. Adam Smith pointed out that education helped to increase the productive capacity of workers, in the same way as the purchase of new machinery, or other forms of physical capital, increased the productive capacity of a factory or other enterprise (Woodhall 1987:21).

In 1999 the Green Paper 'The Learning Age' made a similar point. The Secretary of State for Education argued that through education we need to invest in human capital:


Economic necessity provides a dynamic that is driving educational policy. Elements in the Secretary of State's comments resonate with themes associated with the, much maligned, progressive education. However, a risk with this economic orientation is that a narrow vocationalism comes to define and dominate learning opportunities. There is a wider commitment to learning, and the recognition that the desired learning process can be achieved through diverse means and initiatives, but it could be stifled by an instrumental orientation to the needs of industry. In a period of rapid change these perceived needs of industry have proved notoriously difficult to define and predict (Dyke 1997:6). Transferable abilities such as to learn, reflect, adapt, think and innovate are, in the long term, more likely to equip an
individual more adequately than any narrowly defined vocational skills that are here today and gone tomorrow. The transitory nature of many of these skills may in part explain the enthusiasm for transferability in the key skills of communication, numeracy and information technology in Dearing (1996:3).

The Learning Age Green Paper is peppered with educational ideals and visions yet even in the chapters which are not devoted to work or administration, such as "Realising the Learning Age" (DFEE 1998:45-56) there is a constant reference to skills, employability, traineeships, work, economic performance. It is difficult to avoid the conclusion that for Government business and economics will drive the Learning Age.

The central risk of the economic rationale that dominates the Green Paper is that lifelong learning, while arguably lifelong education, is in practice reduced to lifelong training. The ethos of empowerment, inclusion, community, even democracy, risks being subsumed within narrowly defined vocational ends. What could be the consequences if a narrow vocational agenda comes to dominate the Learning Age? One consequence could be that inclusive lifelong education is emptied out of its original meaning and simply becomes another element of hegemonic control in the form of lifelong training. As Foucault (1979) argued, those in power seek to control behaviour and gain knowledge through surveillance. Lifelong learning that in practice is only experienced as the accreditation of approved (funded) training has Orwellian connotations. In such a pessimistic scenario the main contribution of the Learning Age would be to nurture the work ethic and the production of 'Compliant-Creative workers' (Esland 1990). The Learning Age would contribute to what Beck referred to as the "individualisation of social inequality" (1992:87) part of the process where "individuals become agents of their educational and market-mediated subsistence" (Beck 1992:90). He argued that individual agency should not be confused with emancipation. It refers to a process whereby individuals become more dependent on education and training in a world that has "tendencies toward the institutionalisation and standardisation of ways of life" (Beck 1992:90). More centrally controlled systems and frameworks limit individual decision making.
Usher et al also recognised this dilemma, and note that individuals are encouraged to take active responsibility for their own learning. In practice these ‘active’ learners are forced to comply with pre-defined skills and competencies, such as those specified in NVQs, that in effect subject their learning to close regulation and control (Usher et al 1997:80).

Dearden (1984) and Hickox (1995) both note the ambiguities and difficulties inherent in predicting the needs of industry. The relationship between education and economy is indeed ambivalent, no one particular discourse is likely to dictate history. As Giddens notes, the erratic character of the “juggernaut” (1990) of modernity is riddled with the unintended consequences of action. This is a point not lost on Gelpi who argues “history is full of surprises that enable men to be confident in their future” (Griffin 1987:292). While it may be correct to remain cautious - even sceptical - about the progressive claims or potential of education and training reform, it is legitimate to advocate change connected to what is achievable in the current context and what is perceived to be necessary for future development. The political culture of the 1990s required advocates of educational reform to provide economic legitimacy for their policies, an approach reflected in “Learning to Succeed” (NCE 1993). The complexities of policy making should not deter from discussing realistic proposals that help build pre-figurative models, as Giddens argues “Yet none of this means that we should, or can give up in our attempts to steer the juggernaut” (1990:154).

In order to make proposals for educational reform in tune with late-modernity, it is necessary to provide an interpretation of what the contemporary needs of modernity are. As Ball (1990) noted, policy making in education involves a complex interaction of economics, politics and culture, Ball thus avoids crude forms of economic determinism. A similar awareness of the social, political and economic context is also evident in the work of Gelpi (Griffin 1987). Throughout the history of state education, a form of the ‘correspondence principle’ (Bowles and Gintis 1976) has dominated the discourse on education. From the left and right of the political spectrum, conclusions
differ, but the themes of education, economic structure and individual empowerment represent a continuous thread in educational policy.

This raises the questions asked previously: what are the social and economic needs in late-modernity? A period characterised by a rapid pace and scope to change (Giddens 1990), of ambivalence (Bauman 1991), of globalization (Featherstone 1990) and individualisation (Beck 1992); a period where the economic structure is described as post-Fordist and characterised by "reflexive accumulation" (Lash and Urry 1994). It is now necessary to focus on the educational implications of reflexive or late-modernity.

**Reflective learning as reflexive education:**

As noted earlier reflexivity in social science refers to a theory that takes account of itself, one that may be questioned in terms of its own assumption "or more broadly the self monitoring of an expert system in terms of itself" (Lash and Urry 1994:5). Beck utilised this approach in his account of reflexive modernisation and the reflexive nature of science. Science is seen as most successful when it reflects on its own limits of certainty. For Beck the catastrophic potential of contemporary risks encourages greater reflexivity: a growth in reflexivity that has the potential to challenge social structures and provide for a radicalisation of modernity. He argued that a new form of democratic politics is possible, based on the public response to risk. Such a politics can cross the traditional boundaries of modernity and create a new political alliance. For such a democratisation to occur, Beck suggests that there are two prerequisites; freedom of information and education for uncertainty (IPPR 1996). Education for uncertainty requires people to think, reflect, to transform information into learning that can help them make more knowledgeable decisions.

Whereas Beck provided a more collective focus to reflexive modernisation, Giddens' approach includes the individualised “Reflexive project of the self” (Giddens 1991:244). This privatised form of reflexivity has the opposite impact envisaged by Beck, reproducing social structures rather than
changing them (Lash and Urry 1994:38). The reflexive monitoring of the self, in terms of lifestyle and health, in effect blames the individual and ignores external factors. The effect is that:

collectively produced dangers are 'dumped' into the privatised worlds of individual victims and translated as realities one confronts individually and struggles with through individual efforts. (Bauman 1993:202)

The radical potential of reflexivity in Beck (1992) is muted in Giddens by the need for "ontological security" (Giddens 1991:243). Here lies a source of ambivalence in the concept of reflexivity, which for Beck (1992) is a potential basis for the "radicalisation of modernity", and a concept that has a "conservative bias" in Giddens (Lash and Urry 1994:36). If reflexivity is characteristic of reflexive late-modernity, then following Beck (1992) there may be some "bonuses for radicals" (Kumar 1992:66). Critical reflection and evaluation are key aspects of reflexivity, characteristics that have the potential to facilitate social change. If, however, reflexivity is preoccupied with the self, it may enhance a process of individualisation that inadvertently reproduces social structures. The familiar paradox of education, the potential for individual empowerment, social regulation and control may again be seen.

A more narrow economic application of the concept of reflexivity was developed by Lash and Urry (1994) in their account of contemporary capitalism as reflexive accumulation. Reflexive production requires greater devolution of responsibility and more frequent decision making by employees. With reflexive production problem-solving is decentralised and information flows horizontally across the shop-floor rather than being organised vertically towards central management. A labour force that is expected to problem-solve, make frequent decisions, work in teams and communicate directly with suppliers requires high levels of education and training. Continuous and effective learning becomes a key to success in the workplace (Lash and Urry 1994:60-86). In this aspect of Post-Fordism the shop floor has become "an increasingly 'reflexive habitus' in economic life." (Lash and Urry 1994:122). An educational perspective similar to that of Lash and Urry is presented by Gelpi:
Education is becoming part of the social and productive process and not ... only an initiation to work. The productive process is changing permanently and this means a need for flexibility, mobility, innovations and psychological equilibrium to deal positively with these changes; this means also permanent creativity in education, not only to pick up skills, but to understand the complex nature of the emerging productive process and its relationship to the working and non working environment. This creativity is reserved not only for the top managers, it has become the patrimony of the entire workforce of the productive structure. (Forrester 1995:150).

Forrester (1995) also argued that the approach is consistent with the reflexive modernisation thesis and that Gelpi presents a “risk society perspective” (Forrester 1995:150) for education.

The language of reflexivity has a strong resonance with that of reflection in learning (Kolb 1984, Jarvis 1987). Giddens explicitly defined the concept of reflexivity in terms of reflection (Chignall 1995:11). His account of the “reflexive monitoring of action” is referred to as a “basis for reflective learning” (Jarvis 1992:37). Lash and Urry refer to the importance of individuals’ critical reflection in their account of reflexivity (1994:32). It has been argued that “Reflection has become one of the central tenets of modernity” (Jarvis 1992:56), yet reflexivity and thereby reflectivity are at the heart of the theoretical approaches that describe new forms of modernity (Beck 1992, Giddens 1991, Lash and Urry 1994). Such a theoretical tension is less pronounced if one accepts the late-modernity thesis presented here (Giddens 1992, Lash and Urry 1994), an approach that accounts for change and recognises the contiguity with the past.

The concept of reflexivity, central to sociological and economic accounts of late-modernity, has strong parallels with reflective learning. If the education and training is to meet the present and future reflexive needs of industry, then it follows that a form of reflective learning would have to be a central theme of vocational education, training and assessment. The centrality of reflection as a response to reflexive modernisation is also evident in the Jansen’s and Van der Veen’s (1992) analysis of risk society and critical adult education. They argue that adult education needs to adapt to reflexive
modernisation, and that such changes would stand in "a long tradition of reflective adult education" (Jansen and Van der Veen 1992:285).

Industrial and economic aspects of modernity are argued to be the main dynamic of educational change, this position is consistent with Giddens' account of the "institutional dimensions of modernity" (Giddens 1990:57-63). He argues for a form of "Utopian Realism" (Giddens 1990:154-163), the building of models of what is possible and desirable based on what is achievable; "desired social change will have little practical impact if they are not connected to institutionally immanent possibilities." (Giddens 1990:155). This approach is similar to that advocated in an educational context by Gelpi, who notes "the contradictory possibilities for freedom which exist in the repressive structures of the international division of labour" (Griffin 1987:293).

It has been argued here that reflexivity in post-compulsory education and training is the axial point in which to judge the correspondence between education and the reflexivity of late-modernity. In the current UK political climate, the demonstration of a correspondence between education and economy is essential to securing educational investment. The development of reflexivity and reflective learning provides such a link between education and economic need, it may be that this will hold some hope for progressives and provide for empowerment, self actualisation and change. The growth in reflexivity is not exclusive to the world of work, it is pivotal to individual experience, social and ecological accounts of late-modernity. The accounts of Beck (1992) and Giddens (1991) demonstrate that reflexivity contains a similar source of ambivalence that is characteristic of other aspects of social theory, that between the self and the social, evident in accounts of agency and structure or individualisation and globalization. Whether conservative or radical in outcome, reflexivity remains a central theme of late-modernity. Post-compulsory education and training need to provide for reflective learning in order to meet the needs of industry and the intellectual demands of more reflexive students.

In late-modernity a non-reflexive education system will quickly find itself out of step with the needs of reflexive modernisation and the cognitive demands
of individual adult learners. In order for individuals to survive in society, to cope with the pace and scope of change they need to become more reflexive, they need to learn. Reflexivity can be equated with higher level cognitive skills and reflective learning. This is confirmed by Lash and Wynne in the introduction to Risk Society;

And in the final analysis, Beck, like Habermas, does understand social change as a learning process. He opts, if not for rationality, for a sort of hyper-rationality. (Lash and Wynne 1992:8).

Reflective learning provides a key to education and training in tune with needs of reflexive accumulation, a form of hyper-learning; it can be advocated as a means of breaking out of what Finegold and Soskice define as a "low skills - low quality equilibrium" (Esland 1990:XIV). Reflexivity is central to contemporary accounts of the self, economics, ecology, late-modernity and social change. Whether or not it is a 'reflexivity of the self' or 'reflexive modernity' is less important than the development of the process itself. The economic imperatives suggest that those in power will need to nurture reflective learning in vocational education, a process central to individual empowerment. Reflexivity in education is both a threat to the prevailing power structure yet essential to its reproduction and development, yet reflexivity in education has the potential for radicalism. Once people have developed the skills of reflection it may prove difficult to control what they choose to reflect upon.

Late-modernity not only brings commodification and the domination of techno-scientific instrumental rationality, but also opens possibilities for individuals to reflect critically on these changes and their social conditions of existence, and hence possibly change them. (Lash and Urry 1994:32).

**Empowerment and control revisited**

The control empowerment dichotomy in educational accounts of reflexivity has recently re-emerged in the philosophy of Richard Rorty (1999). A world characterised as one of pluralism and diversity, one of competing truth claims, poses a problem for knowledgeable decision making; how does one
make an informed judgement on the best course of action? Rorty presents a case for democracy and a search for the best achievable consensus. There are parallels here with Jurgen Habermas and a form of 'ideal speech situation. Rorty acknowledges that his philosophical conclusions take him back to John Dewey and pragmatism. Yet with regard to compulsory education, Rorty appears to advocate a control orientated model of education; one rooted in a world view based on consensus rather than conflict. Rorty talks of compulsory education as socialisation, where students learn what is generally believed to be true.

Primary and secondary education will always be a matter of familiarizing the young with what their elders take to be true, whether it is true or not. It is not, and never will be, the function of lower-level education to challenge the prevailing consensus about what is true. (Rorty 1999:118).

Rorty positions the role of schooling as the socialisation of children, a socialisation that does not encourage critical engagement with the world. His conclusions provide a stark contrast to examples of good teaching in inner city Birmingham schools. Tim Brighouse (20.1.2000) illustrated a lecture with a vignette of a teacher of eleven-year-olds who critically engaged with a media report by using a sophisticated hierarchy of question types to ask about the text. The teaching produced a sequence of analysis whereby the class divided into groups, reflected upon and assimilated several possible readings of the narrative. These children had a very clear understanding of the media and the tools of analysis that they used to frame their response. The eleven-year-olds in Tim Brighouse's example when engaged in a critical analysis and a learning process are at odds with Rorty's understanding of school education.

Rorty, writing in the context of education in the United States, does not explore conflicts about what is held to be true. In the USA this is clearly a problematic issue that has produced a variety of local responses. What is held to be true within scientific communities has clearly clashed with what is held to be true amongst certain religious communities. As a consequence the teaching or the exposure of school children to the ideas of Darwin is a
contentious issue in some States. Is there not a case against Rorty's view of compulsory education? A case for recognising the value of the pluralism, tolerance and pragmatism, as advocated by Rorty for adults, within the curriculum of compulsory education; that is all schools exposing all children to a diversity of truth claims even if they assert some as their own. Perhaps tolerance and pluralism is evident in the diversity of local responses to curriculum issues across the USA. However, Rorty appears to suggest that we pretend to children that the world is different to how we believe it is. This would result in schools obscuring reality; hiding the diversity in truth claims and difficulties that exist in establishing a prevailing consensus. Ethical issues aside, in a reflexive world where children, like adults, are exposed to competing truth claims is such a position on schooling credible? Or is it likely to compound bewilderment in children rather than enable them to acknowledge uncertainty?

Rorty also provided an agenda for post-compulsory education in an age he prefers to describe as pluralist rather than post-modern. As noted above, he advocates education as a form of socialisation into the common sense views of a given society. Schoolteachers that offer alternatives to this 'common sense' are mavericks not to be encouraged; "But these exceptions cannot be made the rule." (Rorty 1999:116). Post-eighteen education in the USA is endorsed by Rorty as more critical. He contrasts education in this sector to vocational training and argues for a more critical engagement and scepticism by students; he argued: "But our hope that colleges will be more than vocational schools is largely a hope that they will encourage such Socratic scepticism." (Rorty 1999:116)

If, as Bauman argued, reflexivity means scepticism, Rorty's hope for Socratic scepticism could be seen as an argument for reflexive education for post-compulsory education. Rorty's analysis of contemporary society led him to Deweyian hopes for a better educated democratic electorate. He argued that these conclusions, which flow from the philosophy of Dewey and from Habermas, do not aim to establish universal truth, but are the necessity of freedom. The freedom to come to an agreement, to reach a democratic
consensus amongst human beings. He concludes his chapter on education "I have offered Dewey's exaltation of democracy for its own sake and of growth for its own sake - and exaltation as fruitful as it is fuzzy" (1999:126).

In Beck's analysis of Risk Society (1992) hope is also invested in democracy. Those who carry the risks of the consequences, which flow from new technological developments, in genetics for example, should form the democratic constituents who make the decisions about the applications of such technologies, democratisation being one means of managing the increasing complexity and uncertainty of a world of manufactured risk to future generations. Education provides a means by which democratisation can help people make more knowledgeable decisions.

Although he clearly rejects the label himself, Richard Rorty has been presented as a champion of post-modernism. The control and empowerment dichotomy has also been noted in post-modern accounts of education. One post-modern account of education (Parker 1997) presents a position different to the reflective learning conclusions that are argued in this thesis. This post-modern variant will now be considered.

**Post-modernism in education**

A more reflexive and reflective form of education has been presented above as an appropriate response to our post or rather late-modern condition. Yet reflective teaching has been subject to a post-modern critique (Parker 1997). Parker presented reflective teaching as a narrative of emancipation, student autonomy, democracy and its advocacy of action research. With its acceptance of pluralism, reflective teaching lays itself open to the charge of relativism from more positivist traditions. At the same time reflective teaching remains insufficiently divorced from the positivist paradigm to fulfil its emancipatory aims and is therefore vulnerable to a post-modern critique.

Parker juxtaposed reflective teaching against the more positivistic and hegemonically dominant bureaucratic model in education with a story of efficiency, bureaucracy, inspection and managerialism. Post-modern education is presented by Parker as an alternative to these empowerment
and control traditions in his "Manifesto for education in post-modernity" (1997). He advocates a form of education in post-modernity as one that nurtures deconstruction and embraces relativism. He positions Habermas as essentially enlightenment orientated, as a "bearer of the enlightenment tradition" (Parker 1997:41) and representative of an 'old vocabulary' (Parker 1997:6). He advocates a form of education that borrows from the ideas of, amongst others, Richard Rorty. Parker provides a succinct summary of the post-modern teacher as deconstructor.

Teachers and student teachers will become deconstructive in their readings of educational text, in situating of received wisdom, in their creation of values, in their evaluation of courses and of statements of bureaucrats and politicians.

She or he will practice the kind of deconstructive manoeuvres outlined and employed in this book: reading for the way in which text achieves its effect; unveiling its grounding in contradiction and paradox; highlighting the marginal, the concealed, the suppressed themes, and assumptions; strongly misreading the text; reading with the intention of causing trouble; seeing all assertions, practices and positions as textual; using the text's assumed rationality against itself; identifying and reversing and displacing its conceptual hierarchies; showing its dependency on bivalence; tracing the play of difference in the text's construction of its own origins, the story of its own foundations; exposing the implications of its central metaphors; collapsing its distinctions between the literal and the metaphorical; exhibiting its assumption of the primacy of the metaphor of speech and its commitment to a meta-physics of presence; mapping the adventures of the trace within its narrative; identifying its suppressed need for supplementations; reading as through intertextuality; placing positions sous rature. (Parker 1997:142-143)

The above techniques of deconstruction may provide what Parker described as a more exciting way to talk rather than more enlightened truth (1997:6). They may be useful tools of analysis that provide a fresh insight to text, but is it a new foundation on which to build post-compulsory education? At the beginning of his book Parker suggests not. He presents a relativist narrative that is simply embracing new language games that are not necessarily better than the old language game of reflective teaching.
It is a suggestion that we begin to talk in a different way, not because the old vocabulary was wrong or that it is inadequate to the task of representing how things are, but because it has become passé and there might be a more useful, more exciting way for us to talk about the affairs of the early twenty-first century. (Parker 1997:6)

With Parker's celebration of ironies one can not be sure how literally one should take his agenda for education in post-modernity. Would not his restructuring of educational practice, simply because 'old' vocabulary had becoming 'passé', represent a form of post-modern victory of style over substance?

Yet if we briefly dance with the language games advocated by Parker, his openness and relativism seems to give way to the assertion of a new meta-narrative of 'how to' deliver post modern education. If one attempts a limited deconstruction of his text one finds that, despite his aim to explore new ways of talking, Parker ends up with prescription; after all the title provides a declaration of a specific policy agenda with the use of the words 'a manifesto for education in post-modernity'. A manifesto is not a term associated with relativism, simply providing another way of seeing. A manifesto suggests a set of declarations, judgements and a blueprint or programme of 'what is to be done'. The above quotations provided a long list of instructions to teachers beginning with 'She or he will practice....', no caution or pluralism here. The word 'will' is used and suggests commandment, one universal set of ways of doing. Parker has not chosen to utilise alternative more open and reflexive language devices to advocate a new discourse.

For Parker the post-modern teacher is not a simple post-modern raconteur. Post-modern teachers are clearly gifted with a privileged way of seeing, of reading and interpreting. In their practice post-modern teachers are able to unveil contradictions, highlight the concealed and marginal, even reveal suppressed themes and assumptions. Post-modern teachers 'will' operate as a form of psychoanalysts of text. They offer interpretations and forms of insight and understanding that need not be recognised by client or, for that matter, anybody else. Indeed any of these post-modern interpretations side
step the need for scrutiny by anything tainted as modern and celebrate their readings under the banners of relativism and autonomy. Parker could be said to advocate on the one hand autonomy of interpretation and on the other a set of prescriptions for method - namely deconstruction. It is not the intention here to deny that deconstruction might be a useful and exciting way of talking. However, Parker's argument does not point education towards helping people make more knowledgeable decisions. Indeed when his post-modern analysis addresses these issues he concludes with echoes of the modern, even of Habermas.

Parker uses 'we' to describe his post-modern position, it is a position that borrows from Richard Rorty; indeed a quote from Rorty opens part three of the book on post-modernism. Parker also positions the post-modern and Rorty as providing a different way of talking, one juxtaposed to more enlightenment orientated accounts such as technical rationalism or even Habermas's ideal speech situation. The configuration provided by Parker that positions Rorty and post-modernism as an alternative to the reflective practice discourse starts to dissolve on closer examination. Richard Rorty did not recognise a universal 'we' post-modernists and certainly does not include himself within a post-modern taxonomy. Rorty explicitly argued that the term post-modern has been used so broadly as to render the concept meaningless. With regard to the post-modern he stated:

I have often urged that we would be better off without it - that the word is simply too fuzzy to convey anything. (Rorty 1999:262)

Parker correctly links the reflective practice discourse back to John Dewey, whose advocacy of scientific enquiry and the modern is explicit in Education and Democracy (1916). He thereby links Dewey with technical rationalism and Enlightenment thinking. However, Dewey's philosophy was essentially pragmatist, scientific method was viewed as one means by which we can make more knowledgeable decisions. Pragmatism is a philosophical label, which unlike post-modernism, Richard Rorty readily accepts. Rorty (1999) openly acknowledged his debt to Dewey and pragmatism. The assertion that
knowledge is contingent is not unique to the post-modern position; it is evident in philosophers including Hume, Dewey, Kuhn, Popper, Habermas and Rorty. Parker appears to position Rorty's thinking as a post-modern alternative to a Deweyian position. If, as Rorty argues, post-modernism can be described as the absence of one universal truth, then perhaps reflective practice is closer to the post-modern than Parker suggested.

The other philosopher representing reflective practice in Parker's configuration is Jurgen Habermas who, as illustrated previously, described post-modernists as neo-conservative. Habermas argued that relativism provides no guide for future action. Rorty on the other hand connects Habermas to Dewey as an "anti-authoritarian philosopher of human freedom and social justice" (Rorty 1999:238). Rorty notes the similarities between Habermas and Dewey in arguing that free agreement between human beings as communicative reason, takes the place of the urge to represent a truth - subject centred reason (1999:119). Parker (1997) represents Rorty as a post-modernist alternative to Enlightenment orientated philosophy. Yet as early as 1994 Rorty was placing himself alongside more 'modern' traditions.

These days intellectuals divide up into those who think that something new and important called 'the post-modern' is happening, and those who like Habermas think we are (or should be) still plugging away at the familiar tasks set for us by the Enlightenment. The ones who like me, agree with Habermas ... see our job as the same as our predecessors': getting our fellow citizens to rely less on tradition, and to be more willing to experiment with new customs and institutions. (Rorty 1999:168)

Pragmatism and reflective practice offer some guidance for future action that aims to improve the quality of human life. The relativism embraced in some variants of post-modernism does not obviously lend itself to action. Parker's view of relativism can be compared directly with Rorty. Parker argued

Post-modernists are not debarred from saying that the artefacts of Nazism is wrong; but it is wrong because it offends our literary taste and not because ethical reality itself is offended. And that is enough. (Parker 1997:154)
This statement raises more questions than it answers; debarred by whom, the guardians of the post-modern meta-narrative? Nazism is considered as an abstract construct, worthy of an abstract response, active practical engagement with tyranny is not discussed. Instead we have the peculiar sentence 'And that is enough.' enough of what and for whom? Parker ends his consideration of relativist nightmares with a position that sounds very similar to that of the neo modernist 'bête noire' Habermas: "Actual conversation with fellow human beings is our only guide to where we go right or wrong; hence the conversational relativity of persuasion and truth" (Parker 1997:155). Rorty clearly has no time for simplistic relativistic accounts: "if any fool thing that calls itself a culture is worthy of respect - then I have no use for such thinking" (1999:276). For Rorty an acknowledgement of pragmatism and philosophical pluralism does not entail cultural relativism. Rorty suggested that a 'true' belief is simply the sort of belief which at the time surpasses the competition as a rule for successful future action (1999:270).

The post-modern account, as presented by Parker, risks exaggerating the differences between philosophical traditions. As the above discussion illustrates, there are a number of common threads between Rorty, Dewey and Habermas. Rorty, like Habermas, argued for the use of democratic persuasion rather than force when faced with threats to human happiness. Dialogue and forms of democratic discourse are advocated. Here there are parallels with democratisation within the reflexive modern position of Giddens and Beck (1994). Such a late or reflexive modern position appears to reflect the position of Richard Rorty more accurately than the post-modernist 'talk' of Parker (1997). Rorty clearly has not altogether abandoned the Enlightenment promise; at the risk of being considered 'passed' by some post-modernists he writes:

The utopian social hope, which sprang up in nineteenth-century Europe, is still the noblest imaginative creation of which we have record. (Rorty 1999:277).
As discussed earlier the term post-modern seems to suggest a structural break with the past. If that is the case the concept runs away from Kant’s apriori of learning from experience, which is so central to any conceptualisation of education and learning. If the language of post-modernism leads to a tendency to reject all that was modern and assert all that is new it maybe necessary, like Rorty, to reject the term post-modern. It is by no means clear that there is or will be any kind of settlement on language, the choice of the most appropriate words to use to describe the current period and varieties of social theory. At the time of writing this thesis the author has opted for ‘late’ modern as a descriptor. A similar ambivalence is evident in Usher’s, Bryant’s and Johnston’s account of ‘learning beyond the limits’ (1997). These authors talk of the post-modern challenge. Despite the appearance of ‘post-modern’ in their title their arguments reveal ambivalence about the language we need to adopt:

Post-modernity (or as some would say ‘late-modernity’) is associated with such contemporary trends as the growth of service sector employment, ‘post industrial social formations and Post-Fordist models of production. ... These changing forms of production have been brought about by the transnational flexibility of capital and to a lesser extent labour markets, coupled with new forms of communications and information technologies. (Usher et al 1997:2)

Learning Beyond the Limits

The account of adult education in a post-modern context presented by Usher, Bryant and Johnston (1997) is essentially one which seeks to accommodate the reflexive nature of modernity, its organisations and institutions. The authors present a convincing case for a more reflexive engagement in research and educational practice. In research they advocate approaches that go beyond the limits of the dominant research paradigms and engage with more reflexive forms of research such as participatory or emancipatory research. These approaches are explored in more detail in the methodology chapter.
Their argument originated in the earlier text the "Captive Triangle" (Usher and Bryant 1989). In their original text the authors challenge a foundationalist approach to adult education. A foundationalist approach is described as one where theories originating in other disciplines such as sociology or psychology dominate the discourse on educational practice; where foundation subjects direct practice. In such a scenario practice is subordinated to theory, the education of practitioners would therefore simply need to take the form of instruction in theory, theory which teachers would be expected to uncritically apply to practice; the flow of knowledge would be one way from foundation theory to practice. Such a relationship is hierarchical, with knowledge imposed from foundation subjects to adult education practice. Usher and Bryant advocate a more symbiotic relationship between theory and practice, one where theories are adapted in the light of experience and through reflection on that experience. In their model, theory could respond and adapt to practice, it would be grounded in the experience of practice. Thus for Usher and Bryant the captive triangle referred to the relationship between theory, practice and reflection. Further analysis of the 'captive triangle' of Usher and Bryant (1989) will be provided below in the section on reflective learning.

Another theme that emerges from the post-modern challenge of Usher and Bryant is the acknowledgement of context. It is the adaptation of practice to changing context that produces practical wisdom, that is the ability of the practitioner to adapt their knowledge, theoretical or practical knowledge, to changing circumstances. Practitioners are forced by the need for action, by practice, to adapt and deliver means by which they can meet a particular end. Practitioners have to be pragmatic; they need to respond appropriately to their particular situation or context. Given that practitioners are forced to adjust their theories and actions in response to circumstance, it is inappropriate to look at their knowledge as received wisdom from foundation subjects such as psychology. It is not enough for their knowledge to work in principle or theory, it must work in practice. Usher and Bryant also argue that practitioner knowledge cannot be reduced to a series of skills or techniques.
that can be relied upon. Practical knowledge does not consist of a prescribed set of strategies that are simply picked up and used when necessary. Instead it is situated in action and lived experience. As Usher et al argued on practical knowledge:

It is always there and ongoing because we always find ourselves in situations where we have to make choices about how to act and then put those choices into effect, even if the choice is not to act. We might act inappropriately but that is not due to rusty or inadequate skills but because we have not ‘read’ the situation properly,” (1997:129).

The question that always faces the practitioner – ‘How ought I act?’ – does not have an invariant answer; rather there are different answers for different contexts and different values. (1997:130).

This poses a dilemma for education or training that focuses on received wisdom alone, be they theories derived from academic research or a set of performance criteria based on the analysis of a job. National Vocational Qualifications (NVQs) were introduced in an atmosphere of colleges being perceived as producing qualified people who understood the theory but could not do the job. An NVQ was derived from a functional analysis of the occupational role which produced specific performance criteria (Dyke 1996). Being employer-led these new specifications of skill were expected to meet the needs of industry. Yet if one takes Usher’s and Bryants’ analysis further have we not replaced a top down foundational relationship of theory to practice with another variation on the same theme? That is, a top down prescription of skill requirements, performance criteria that can be learnt, reproduced in the work place and expected to enable assessment of competence. Have we simply replaced a theory to practice relationship with a skill specification to practice relationship? The NVQ model adopted in the UK has sought to provide a form of legislation of skill, complex prescriptions of performance criteria, which if followed to the letter are said to provide for a national standard of competence. The problems of trying to control through legislative standards have long been recognised. Michel De Montaigne mocked this type of approach to control through specification when he wrote of the tendency to legislate.
I hardly agree therefore, with the opinion of that man who tried to curb the authority of his judges by a multitude of laws, thus cutting their meat up for them. He did not understand that there is as much liberty and latitude in the interpretations as in the making of them. (Montaigne 1580:344)

Both versions, theory to practice and skill to practice, fail to acknowledge how skill/theory interact with ‘thinking in practice’, a process where theory or prescribed skills are changed in the light of experience and reflection to produce something different from the original prescription. What may be formed is a dynamic form of practitioner knowledge that is situated in context. Jarvis described such knowledge in “The Practitioner Researcher” (1999); his approach will be considered later.

Despite their enthusiasm for practitioner shaped knowledge, Usher and Bryant caution against the abandonment of theory and its replacement with a narrow focus on practice techniques. Such a position can lead to simple reflection on practice that is never exposed to the possibility of criticism or challenge from others beyond the practitioner’s experience. Presenting a similar argument to that of Jurgen Habermas, outlined earlier, on the relativism of post-modernism, Usher and Bryant suggested that this subject-centred reason is also “ultimately a conservative position” (1997:133). It may inhibit critical reflection and informed reflection on practice. In such a world one can imagine didactic lecturers continually refining the methods by which they deliver their presentations and never being exposed to alternative ideas about learning and teaching. The didactic lecture, as a method of teaching, would remain unexamined, alternative learning and teaching strategies not explored. Such an experience was reported to me; for a number of years a tutor lectured through an interpreter to an audience, who travelled to the lessons from overseas and none of whom spoke the lecturer’s first language. The lecture was regarded as difficult to deliver effectively but had been refined in the light of experience. Over the years more time and effort had been put into this event including meetings with the interpreter prior to the lecture, handouts translated in advance, slides also being translated and the lecturer learning a few greetings in the first language of the audience. The
The lecturer was undoubtedly a reflective practitioner of sorts, who had systematically evaluated lessons and worked through plans of action for improvement. It was not until the lecturer was exposed to alternative teaching and learning strategies, through a teacher education programme, that the lecturer fundamentally considered changing the teaching strategy altogether. Exposure to theory and the experience of others remains a vital element of learning.

There are clearly benefits to be gained from knowledge external to practitioners' primary experience. Such knowledge may be derived from a variety of sources including other practitioners, stakeholders or other subject disciplines. Usher et al argue for a curriculum for the education of practitioners based on practice rather than theoretical knowledge organised in disciplines. Such a curriculum would reach out beyond those practitioners in formal institutions and "embrace all enablers of learning" (Usher 1997:133). Usher and Bryant argue against simply reversing the theory to practice relationship with its reversal through a practice to theory relation. That is replacing the privileging of theory with the privileging of practice. They caution against a simplistic adoption of practitioner wisdom and informal theories. Instead they argue for formal theory and practice to be interwoven; "practice needs to be conceived as action informed by theory" (Usher 1997:135). In their earlier text they (1989) referred to praxis as practice that is informed by theory. In 1997 this form of practice was informed by theory and identified as reflexivity.

Reflexivity requires that theory and practice are mutually interactive and recognised as such. Here, informal theory, by being brought to consciousness, becomes open to change in the light of practice, which itself changes with changes in informal theory. (Usher 1997:137)

Formal theory provides a means, a set of tools that can enable practice to be reviewed, reflected upon and changed. Formal theory from secondary experience together with informal theory derived from practitioner's primary experience and reflection form a basis for reflexive practice.
The role of formal theory is to be a sounding-board, a resource for critiquing informal theory and exposing its limitations. As one component in a mutually interactive process, it can itself become more easily subject to critique. (Usher 1997:138).

The relationships between theory, practice and reflection are therefore equal, all are informed by each other. It is a reflexive learning relationship that does not automatically privilege or subordinate one form of understanding to another. It is theory, practice and reflection together that will enable practitioners to select beliefs that for the time being surpass all others as a guide for future action.

In the emphasis given to theory, practice and reflections the account presented by Usher, Bryant and Johnstone (1997) is similar to the position on reflective practice presented by Schon (1983). However, where Usher et al differ from Schon is in the emphasis given to formal theory and the social and cultural context in which reflection takes place. They suggest that Schon presents an individualistic account of the reflective process as a psychological rather than social process. There is no awareness of the diverse interpretations of what education is, what it is for or the kinds of political settlements which define practitioner roles and shape how practitioners define themselves. Although I would be inclined to refer to socio-economic context, the position of Usher, Bryant and Johnstone is accepted; “The relationship between theory and practice is one which can only be understood in terms of particular socio-cultural contexts.” (1997:141).

Post-modern / late-modern education:

The above discussion has attempted to locate the themes of analysis that can be found in contemporary social theory to interpretations of the implications for education. Reflexivity is a recurring theme in social theory and has influenced educational literature. Reflexivity in education and learning may be essential to meeting the socio-economic needs and the demands of more reflexive students. A more reflexive form of education has potential for empowerment but, as with other educational interventions, will be bound by attempts of those with power to control. A variety of post-
modern educational responses have been explored and those closer to a late-modern position are arguably most likely to promote the making of more knowledgeable decisions.

As noted in earlier chapters, many of the concepts claimed as post-modern can be found in earlier forms of modernity. It is the post-modern interpretation of the Enlightenment, rather than the Enlightenment philosophies themselves, which perhaps produced what Lyotard called the post-modern “incredulity towards meta-narratives” (Green 1997:14). The assumptions developed in this thesis are located in scepticism towards a relativism that emerges in some variants of post-modernism. The position endorsed by Habermas, Giddens and Rorty is accepted here; that through what Habermas might call an ‘ideal speech situation’ it is possible to establish that some truth claims are more convincing and useful than others, even though these beliefs might change in the light of new experience. In mundane educational terms, some forms of knowledge are more helpful in guiding us in making good use of the precious time we spend in our classrooms. Green (1997) argued that much of the post-modern rhetoric would produce an education system that those on the libertarian right wing of politics would be comfortable with:

What is clear is that pluralism and diversity in England has been synonymous with the most hierarchical, elitist and class differentiated system in the world. There is no reason to believe that the diversity and pluralism advocated by the post-moderns would be any different. (Green 1997:26).

Green also goes on to suggest that the real tendency in the current education system is not diversification but increasing centralisation and control. For Green it is the economic variants of contemporary analysis, particularly the post-Fordism of Brown and Lauder (1992) that has provided insight and understanding of the relationships between education and wider society.

Usher, Bryant and Johnstone (1997) provide a more successful post-modern (I would argue late-modern) perspective. These authors, like Jarvis who will be discussed in the next section, respond to the ‘post-modern’ challenge with
approaches that integrate theory, practice and experience with reflection and awareness of the social-economic context. There is no modernist agenda that privileges formal theory over all other forms of knowledge. Instead there is an awareness of the reflexive relationships between different knowledge formations, a position that is similar to the late-modern sociology of Beck or Giddens. As such this educational literature opens up the possibility of a late-modern social learning theory: a sociology of learning with a genealogy in reflexivity on the one hand and reflective learning on the other. The philosophy and sociological context of reflexivity has been explored in chapters one and two. The next section will consider reflective learning.
Chapter Four: Reflective Learning

In earlier chapters, a case for reflective learning has been presented in sociological and philosophical terms rather than as simply a cognitive or psychological process. Reflection was evident in the philosophy of Francis Bacon, it was also a strong Enlightenment theme evident in the work of Hume, Locke and Kant whose synthetic a priori has parallels with reflective learning. The scepticism and empiricism that can be found in Enlightenment philosophies suggest that reflection on experience provides a sound basis for knowledge. The significance of this for education was not lost on the Enlightenment writers themselves. I have argued above that education is a relatively unacknowledged feature of the Enlightenment and remain at the heart of the modernity today. Education can contribute and respond to our reflexive times by encouraging more reflective learning.

The concept of reflexivity is central to late-modern and some post-modern accounts. The relationship between reflexivity in the social sciences and reflection in educational literature has been explored above. This chapter considers the literature on reflective learning. The focus here will be on twentieth century literature on reflective learning including the work of authors including Dewey, Lewin, Kolb, Freire, Schon, Boud, Mezirow, Jarvis and Usher and Bryant. One difficulty with writing about reflective learning is that authors have different conceptualisations which Atkins argues "raises the question of whether these authors share a common understanding of the term 'reflection'…" (1993:189). The purpose here is to tease out the common themes and perspectives within the reflective learning discourse.

John Dewey

Dewey's endorsements of scientific methods of enquiry have already been discussed. It has been argued, with reference to Rorty, that Dewey's scientific orientation revealed a commitment to pragmatism rather than slavish adherence to a modernist project. Loughran provides further support
for this approach "neither the inductive or deductive logic fully accounts for reflective thinking as described by Dewey. This was because each form of logic views critical thinking as a set of skills and fails to recognise the necessary uncertainty of the problem situation" (Loughran 1995:433). For Dewey the problem is 'situated' and has to be understood in context. Having considered Dewey earlier in terms of pragmatism it is now necessary to focus on his articulation of critical thinking and reflection.

Dewey defines reflection as purposeful consideration of ideas in terms of the evidence presented and further implications of any conclusions drawn. He argued that his educational method applied equally to children and adults: "there is a single 'general method' uniformly followed by the mind in an effective attack upon any subject" (Oksenberg-Rorty 1998:403). He argued that the essentials of reflection and essentials of thought were the same:

They are first that the pupil have a genuine situation of experience – that there be a continuous activity in which he is interested for its own sake; secondly, that a genuine problem develop within this situation as a stimulus to thought; third, that he possess the information and make the observations needed to deal with it; fourth, that suggested solutions occur to him which he shall be responsible for developing in an orderly way; fifth that he have the opportunity and occasion to test his ideas by application, to make their meaning clear and to discover for himself their validity. (Dewey 1916:163).

The optimism and hope Dewey placed in scientific method is clear from the above quotation. In later work he (1933) described three qualities or attitudes required to successfully undertake reflection. These included open-mindedness, the ability to consider all points of view; a wholehearted approach which embraced enthusiasm and excitement for knowledge and learning; taking active control and responsibility for one's actions, which includes being aware of the consequences of these actions for others. These qualities were evident not only in his work but in John Dewey's actions in life, not least his defence of the free speech of Bertrand Russell (recorded by Russell in his autobiography 1968:134).
The implications of John Dewey’s thinking for teaching are summarised by Jarvis (1997:149) and include: the identification of the needs of students; cooperative relationships between teachers and learners; the use of experience in learning; the systematic organisation and structuring of learning and consideration of the implications of learning. Dewey’s approach has been translated in a whole body of literature on the application of theory to reflective practice. Dewey’s enthusiasm for experimentation and testing of ideas in practice is similar to the theory, practice and reflection relationships discussed by Usher Bryant and Johnston (1997). Dewey would not accept the privileging of received wisdom or theory over experience. He endorsed the views of Montaigne, Bacon and Locke, outlined above, that ideas must be tested by experience. Dewey argued that the learning of received wisdom resulted in ‘hearsay’ and accumulated opinions, many of which were absurd (1916:294-295). He argued that men should observe for themselves, formulate their own theories and not accept the imposition of dogma as truth. For him what is taken for knowledge is situated in context; it may change with new experience: “What is taken for knowledge - for fact and truth - at a given time may not be such.” (1916:295). Dewey contrasts what is taken for granted and called knowledge with critical thinking which starts from doubt, scepticism and a hunger to learn: “Through its critical process true knowledge is revised and extended, and our convictions as to the state of things reorganised” (1916:295).

Kurt Lewin

Kurt Lewin is well known for his work on leadership styles, change agency and his early development of action research as a method of enquiry. His contribution to action research as a collaborative and democratic form of enquiry will be discussed in later chapters. Implicit in Lewin’s action research is the notion of learning through reflective practice. His model of action research was based upon a cycle or spiral of four key stages including planning, acting, observing, reflecting (McNiff1988:22). In his work on experiential learning David Kolb (1984) accredits what has popularly been referred to as the Kolb cycle of reflective learning as the “Lewinian
Experiential Learning Model" (Kolb 1984:21). Lewin promoted this model for use in action research and laboratory training methods. The four stages are described as:

1) concrete experience the 'here and now' experience: which in turn forms the basis for

2) observation and reflection on experience, which in turn is followed by

3) the development of abstract ideas and concepts, and finally

4) testing of these concepts and abstract generalisations in new situations.

Another theme recognised by Kolb in the work of Lewin was the necessity for sharing of information, for dialogue: “when human beings share an experience they can share it fully concretely and abstractly” (Kolb 1984:21).

A further observation of Lewin’s was the need for feedback processes that link the results of observations to actions. The emphasis on testing theories in new situations makes the process particularly apt for a period of rapid change: knowledge is not seen as fixed, but constructed and situated. For Lewin action research and experiential learning were aimed at people making informed, more knowledgeable, decisions. The process is essentially pragmatic, concerned with thoughtful living and doing.

There are strong parallels between the learning processes identified by Dewey and Lewin. Both develop a method that could be seen as 'scientific' or positivistic, though perhaps this misses the pragmatism and openness to diverse sources of data that is evident in both Dewey and Lewin. Scientific method was seen as a means to an end, a radical alternative to the blind acceptance of received wisdom, rather than a panacea in itself. Both Dewey and Lewin were committed to democratic forms of enquiry and Lewin’s positivism was tempered by an emphasis given to subjective personal experience. Neither advocated any form of the trial and error learning that is associated with more behaviourist models. They promoted systematic forms of enquiry based on planning, gathering of evidence and experience followed by thoughtful observation, reflection and further testing of ideas in practice.
While many of the features of Lewin’s model are recognisable today the field of enquiry he helped initiate has evolved considerably. His approach itself has been subjected to criticism. He has been described as advocating externally directed intervention, being functionalist in orientation, and too prescriptive about practice (McNiff 1988:33). Lewin’s approach appears to be a long way from contemporary accounts of practitioner based research in education and more recent conceptualisations of reflective learning. However, the debt to Lewin in promoting experiential learning and reflective practice is widely acknowledged (Kolb 1984, McNiff 1988, Usher 1996, Jarvis 1999).

David Kolb

Kolb provides a definition of learning that is essentially reflective “Learning is the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping experience and transforming it.” (Kolb 19984:41).

Kolb (1984)
Kolb presents the Lewinian model of concrete experience, reflective observation, abstract conceptualisation, and active experimentation. He notes that it is possible to begin this cycle at any point, but suggests the learning follow the linear direction given in the cycle. In this respect his model, while being succinct, useful and logical in itself, may oversimplify the possible pathways to reflective learning. This criticism will be explored in more detail in the examination of Jarvis' account of reflective learning.

The emphasis in Kolb is on the learning process rather than the content or outcomes of learning. He does not adopt behaviourist positions on learning but instead argues that learning is derived from and continually modified by reflection on experience. This emphasis on process rejects what Freire called the 'banking' concept of education that focuses on the memorising of received wisdom. Instead it celebrates the creativity, transformative and praxis orientation to education that can be found in the work of Paulo Freire:

Knowledge emerges only through invention and reinvention, through the restless, impatient, continuing, hopeful inquiry men pursue in the world, with the world and with each other. (Freire 1972:46)

In outlining the characteristics of experiential learning Kolb draws on the work of the American pragmatists including John Dewey and William James who argued, like Kant, that knowledge is derived from and grounded in experience. In many respects day to day experience may remain relatively constant and unchanging. A high degree of what Giddens (1991) referred to as ontological security can be gained from continuity of experience, though Kolb warns that this can produce dogmatism, whereas constant change (our current condition?) provides a continuous bombardment of new experience that can leave people “paralysed by insecurity, incapable of effective action” (Kolb 1984:28) and in a state of absolute scepticism. There are further parallels with Giddens (1991) on this point; Kolb argued for a middle line between these two extremes and calls for a position of provisionalism and partial scepticism as a guide to inquiry and learning. (Kolb 1984:28).
Kolb recognised that there may be tensions between experience and theories, observation and actions; he acknowledged the conflicts inherent in learning. He notes that “The process of learning requires the resolution of conflicts between dialectically opposed modes of adaptation to the world.” (1984:29). For Kolb, learning involves abilities which are opposites. The learners require qualities that enable them to be open to new experiences, reflect and think about experience from different perspectives, develop their own abstract theories and use them to actively solve problems. The different aspects of the learning cycle require different roles with differing demands on the learner. The reflective learner is neither practical nor academic; they need to adapt to this dialectic and be both.

Kolb defines learning as a holistic process central to living and being; it is not exclusive to the realm of education or other specialised aspects of functioning. In this sense his view is close to that of Jarvis (1992) who argued that learning was an essence of being and education was increasingly becoming an essence about having. For Kolb learning is a major means by which humans adapt; it is a lifelong process that occurs in schools, families, work, communities and relationships. Kolb notes the similarities between experiential learning and other accounts of human processes such as problem solving, scientific inquiry, decision-making, creative processes and revolutionary praxis. This thesis has attempted to demonstrate similarities between the learning process and key philosophical ideas that can be found in the makings of modernity from Enlightenment thinking to late-modern and post modern social theory. Kolb’s view is similar to the one presented in this thesis; that reflective learning, as a lifelong process, has become more essential as an adaptive process that enables people to meet contemporary challenges and perhaps seek to transform our late-modern age.

With Kolb, as with the account of Jarvis (1987) and Usher et al (1997), learning is acknowledged as situated in context. It is this aspect of the learning theory that, Kolb notes, has been widely ignored. Research and practice in education, he argued has been replaced by a “person centred
psychological view" (1984:34). Interestingly Meittinnen (2000) has, correctly in my view, criticised Kolb for presenting an individualised model of learning, this critique will be discussed in the conclusions. Kolb referred to the process of experiential learning as involving a transaction between the person and the environment. Dewey acknowledged the importance of situated experience and past experience that has changed the conditions in which subsequent experience takes place, Dewey argued:

The difference between civilisation and savagery, to take an example on a large scale, is found in the degree in which previous experiences have changed the objective conditions under which subsequent experience takes place. (Kolb 1984:35)

It is the recognition and emphasis on the social context of learning that is the strength of later accounts such as that presented by Peter Jarvis (1987) or Usher, Bryant and Johnston (1997). These educational accounts connect with the changing nature of modernity and have implications for notions of the learning society and lifelong learning which have filtered into the rhetoric of policy makers (Dyke 2000). The social context of learning will be discussed further in concluding chapters.

The last characteristic of experiential learning as represented by Kolb is that “Learning is the process of creating knowledge” (1984:36). Kolb continues to develop the distinction between objective social knowledge and subjective life experience used by Dewey. He argues that learning can occur in the interaction or rather transaction between these two types of knowledge. What has been referred to earlier as partial scepticism enables learners to accommodate both sources of knowledge. The similarities here with the sociological concept of reflexivity as used by Beck (1992) and Giddens (1990) are striking. As outlined above Beck called for a democratisation whereby expert knowledge and lay knowledge are valued and reflexively engaged with as a means of deciding future action. This compares with Kolb’s account of the tension implicit in social and personal knowledge as a source of experiential learning that creates and transforms knowledge:
All knowledge systems are refinements of common sense based on different assumptions about the nature of knowledge and truth. In this process of refinement he [Pepper] sees a dilemma. Although common sense is always applicable as a means of explaining an experience, it tends to be imprecise. Refined knowledge on the other hand is precise but limited in its application or generalizability because it is based on assumptions or world hypotheses. Thus, common sense requires the criticism of refined knowledge, and refined knowledge requires the security of common sense, suggesting that all social knowledge requires an attitude of partial skepticism in its interpretation. (Kolb1984:38)

Here we have an analysis of learning from an educational perspective operating within a different discourse to social theory, though running on parallel tracks, adopting a position that connects directly with developments in modern social theory. Kolb’s position is reflexive, the transaction between different types of knowledge claims is precisely what Beck refers to. It mirrors an example Beck used of the tension between the scientists’ and farmers’ accounts of the health risks associated with the use of pesticides. The scientists’ laboratory experience suggested the chemicals were safe; the farmers’ practical field experience reported health risks. What was required was an open and reflexive engagement, one that replicated the values outlined here in reflective learning, between these knowledge claims. What occurred in reality, in Beck’s example, were attempts to privilege one source of experience over another.

**Paulo Freire**

Paulo Feire’s writing can be inspirational and formative, particularly given the context in which he was writing and the personal sacrifices which this entailed in his life. Themes identifiable in Freire underpin the aims of this thesis, most notably his commitment to praxis. For Freire praxis refers to “The action and reflection of men upon their world in order to transform it.” (1972:52). It is interesting to note his emphasis on action; it is placed before reflection in this sentence. His position is similar to that of Aristotle in recognising that this ability to act and reflect is an essential human quality. Freire provided a version of the personal as political; his approach strongly
resists any external imposition of theory. Theory is never viewed as politically neutral, and should never be ‘deposited’ in what Freire refers to as a banking system of education. Freire tends to view any didactic form of education as being where the received views of the dominant are imposed on the dominated. Revolutionary leaders and teachers must enable others to find their own voice through praxis. If they do not they undermine any claim to empowerment.

By imposing their word on others, they falsify that word and establish a contradiction between their methods and their objectives. (Freire 1972:97).

This abhorrence of teaching as the transmission of the dominant ideology or communication of cultural knowledge leads Freire to a dialogic model where teachers are facilitators in a relationship of equals with students. The teacher’s role is more Socratic, posing problems rather than problem solving. Jarvis draws out the minimal implications of Freire’s method for teaching adults:

He highlights the fact that teachers have to break down the barriers between teacher and taught; should speak the same language as the learners; should be aware of how they construct their universe of meaning and what they see as their learning needs; should start where the learners are and encourage them to explore and learn from their experiences. (Jarvis 1995:151).

Freire’s writing has to be understood and respected within the social and political milieu of Brazil at his time of early writing. A benefit of this approach is illustrated by Usher, Bryant and Johnston “this moves away from the purely technical or methodologically neutral considerations of conventional research as well as avoiding the extremes of past Marxist preoccupations with theoretical rigour.” (Usher 1997:194). The privileging of theoretical accounts can lead to distance from the practice experience that radicals seek to liberate. This is the position that Freire so forcefully and convincingly challenges when he asserts the centrality of primary experience.
From reading Zygmunt Bauman’s ‘Post-modern Ethics’ (1993) and considering the Habermas position on dialogue in the form of ideal speech situations, a slightly different view of emancipatory effort is possible. Bauman draws on Levinas and the Kantian universal ethic and suggests that the only universal ethic is concern for the other. Surely concern for the other involves some form of engagement with the other, some form of relationship? Habermas’s communicative action and ideal speech situation provides a means by which people can engage with the other. Does Freire’s privileging of what Jarvis (1992) has termed primary experience mitigate against engagement with the experience of others and thereby learning from the experience of others? Is there a risk of parochialism and a closed localised world view emerging with a failure to engage with others for fear of being dominated by their ideas? Formal theory may reflect different, quite possibly dominant world views, but in a sense it reflects the secondary experience of others that needs to be engaged with. It can be viewed as the experience of others, if grounded in experience and sensitive to contextual issues it can also occupy space that is relatively autonomous of the hegemony. Is the reading and exposure to Freire’s text, the imposition of his words, another form of domination? I think not; it can be inspirational to read and engage with others’ ideas. Reading, learning, reflecting, entering a dialogue with the secondary experience of others, whether this is formal theory or research based knowledge, is not inevitably a banking concept of education that results in one being dominated by those ideas. To suggest it does result in domination is to present a passive view of readers as cultural dupes. The next author to be considered is also sceptical about the value of secondary experience in the form of formal theory or research based knowledge.

**Donald Schon**

Another writer whose themes of reflection seem pertinent to our late-modern age is Donald Schon; his work has had enormous influence on reflective practice in education. He talked of a crisis in professional knowledge characterised by the complexity, uncertainty, change, instability, uniqueness and value conflict (1983:3-21). His discussion is located in references to
post-industrial society and a critique of technical rationality. There is therefore a link between Schon’s understanding of reflective practice and the contemporary social theory outlined above. There are parallels between Schon and Dewey, though each uses their own language; both refer to a process of monitoring and reflecting upon actions and the effects of actions with a view to developing new theories in use. Dewey’s approach however is more open to scholarship as a means of critical inquiry. Schon prefers anecdote and down-to-earth examples of what he refers to as reflection in action. For example:

An artful teacher sees a child’s difficulty in learning to read not as a defect in the child but as a defect of his own instruction. So he must do a piece of experimental research, then and there, in the classroom. He must be ready to invent new methods and must endeavour to develop in himself the ability of discovering them. (Schon 1983:66).

Reflection in action therefore requires flexible professionals who can think on their feet and respond creatively to new situations. It is an ability that is readily recognised by those in the teaching profession. Schon described practitioners as possessing tacit knowledge that is spontaneous, they tend to ‘know more than they can say’. He advocates the use of case studies as a means of enabling practitioners to tease out and reflect upon their “knowing in practice” (1983:viii).

Schon (1983) gives primacy to the practitioner’s intuitive expertise. The whole gist of his book is towards reflection in action, but he does devote three pages to the possibility of “reflection on action” (1983:278-280), a form of evaluation of one’s performance. Yet even here he warns of paralysis in action that comes from a “lingering model of practical rationality” (Schon 1983:281). Schon is scathing about technical rationality, and the idea that theoretical bodies of knowledge can successfully direct practice. His account of technical rationality might appeal to post-modernists of a relativistic persuasion. He celebrates diversity and privileges subject centred reason. Schon has undoubtedly struck a chord with his appeals to common sense and his everyday folksy examples that illustrate his argument. As Usher,
Bryant and Johnston argue, Schon's work has a canonical nature in its dominance of education programmes. Yet Schon, who sought to promote reflection in action in place of theorising about practice, has paradoxically produced a theory of reflective practice. In this respect he is also subject to the charge levelled at post-modernism that in rejecting grand theory as meta-narratives they have in turn produced a new meta-narrative on the death of meta-narrative. A potential weakness of Schon is that he ends up privileging practice over theory. He is openly dismissive of the possible contribution of subject disciplines:

The existence of widespread capacity for reciprocal reflection-in-action is unlikely to be covered by an ordinary social science which tends to detect and treat as reality, the patterns of institutionalised contention and limited learning which individuals transcend, if at all, only on rare occasions. (Schon 1983:354).

Usher, Bryant and Johnston note that Schon presents a powerful challenge to technical rationality, but has done so by "doing theory" himself (1997:145). He is recognised as representing a body of thinking that has disfavoured formal theory. Usher, Bryant and Johnston (1997), with reference to the work of Brookfield, re-assert a place for formal theorising. It is formal theory that fully enables practitioners to consider their practice in context, to examine the wider social relations and policy agendas. Without testing and review the hunches practitioners have about practice could simply be wrong, or so specific and localised that usefulness of such intuition is limited; it may not equip practitioners to deal with change and new situations. Schon’s model of the reflective practitioner risks producing the isolated practitioner. Formal theory provides a means whereby practitioners can share experience and learn from each other. There are also many stakeholders in education beyond the teacher as practitioner; formal theory provides a means of communication between all those with an interest in the sector, a means of exposing ideas to the critical reflections of others.
However, that is not to say that formal theory should not be more accessible. For Brookfield formal theory should include qualities advocated by Schon and be:

appropriately grounded in practitioners’ experiences, accessible to practitioners in terms of language and critically sensitive to the contexts of practice. (Usher 1997:146).

The criticisms of Schon by Usher, Bryant and Johnston (1997) have contributed to recent calls for “reconceptualising the professional role of the further education teacher beyond the reflective practitioner.” (Green and Lucas 1999:213). Schon’s views are said to imply a narrow conception of ‘action’ and thereby marginalise other stakeholders and practitioners who are not classroom teachers. The context of the Further Education (FE) sector reveals cross sector problems such as student retention that could benefit from cross sector research based knowledge. It is the reversal of the theory-practice dualisms (privilging practice at the expense of theory) that gives most concern about Schon’s reflective practitioner; because knowledge in use is highly ‘situated’ reliance on such experience alone may not equip a practitioner to deal with changing situations or ‘others’ beyond their direct cultural or biographical experience. For Usher, Bryant and Johnston, knowledge is:

dependent upon interpretations made in particular contexts and in relation to specific cultural conventions and contexts. Therefore, it does not readily provide concepts or criteria that allow professionals to assess and relate different ‘theories in use’ to one another or to research based knowledge. (Green and Lucas 1999:216)

As earlier accounts of reflection have pointed out, critical thinking can be facilitated by reflection at a distance from the phenomena itself; critical thinking and reflection are sharpened through dialogue with others. Perhaps Schon’s account requires greater consideration of ‘reflection for action’, where professionals can learn from sharing their primary experiences and the experiences of others.
Atkins (1993) suggested that many of the authors on experiential learning or reflective learning do not offer a precise definition of the term. As David Boud suggested at a University of Surrey seminar (1998) the concept of reflective learning has been taken over by the professions and become all pervasive. As a result Boud hinted that he prefers to emphasise learning from experience. He also recognised that the two concepts of reflective learning and learning from experience are entwined. Reflective practice as a concept has perhaps gained hegemony in some professional training, though possibly used in common-sense terms rather than with strict references to the literature. In some aspects reflective learning may have an element of the status attributed to the word education: elusive in terms of precise definition but respected as a concept associated with the universal good. However, as the examples in this chapter illustrate, there are a number of common themes from diverse sources that produce a coherent conceptualisation of reflection in learning.

Boud argued that reflective learning concerns the provision of a framework that helps make sense of experience, which enables people to learn from experience. He defined reflection as:

> Reflection consists of those processes in which learners engage to recapture, notice and re-evaluate their experience, to work with their experience to turn it into learning. (Boud 1993:9).

Boud acknowledges that experience is the foundation of learning, but in itself does not automatically lead to learning. Unless learners engage with and transform experience, learning may not occur. We can all think of examples where people have not engaged with experience, but simply repeated their mistakes time and time again. As Costa Criticos argued “Sadly the only conclusion that can be reached is that we do not learn from experience. Experience has to be arrested, examined, analysed, considered and negated in order to shift it to knowledge.” (Boud 1993:161). This position is similar to that of Jarvis discussed below.
Boud recognises that learners actively construct their experience. The learner’s biography, their life experience, social and cultural contexts, all contribute to a well of experience people can learn from. What learners bring to an event has an effect on how they experience it and their predisposition to learn from it. Boud argued that teachers have a role in creating experiences or events from which students can learn: “it is the experiences which teaching helps create that prompt learning, not primarily the acts of the teacher.” (Boud 1993:9). There are clearly endless possibilities by which imaginative teachers can provide learning experiences and activities that enable these events to be transformed into knowledge. Part two of this thesis presents case study material from action research with teachers creating experiences and opportunities for reflection that promote effective learning. Boud (1998) warned against reflection, as a form of recipe following that is demanded by teachers out of context and without a framework of theory or experience, he was critical of isolated activity, masquerading as reflective learning. During the seminar David Boud (1998) speculated as to whether reflection is appropriate to a formal learning context. I interpreted his concern here as being with the proliferation of assessed reflective journals that are a common feature in the professional training of teachers and nurses. There are clearly ethical issues concerned with the assessment of personal reflections. Reflection in learning needs be open and concerned with weaknesses as well as strengths, while assessment by its very nature is concerned with the presentation of strengths. Summative assessment of journals can empty reflection of any genuine critical thought, becoming simply another assessment hurdle students are expected to jump; at worst the journals lack authenticity and value, becoming last minute positive presentations of the self. In addition to the problems of assessment such journals can promote inappropriate disclosure of information by students to teachers. Set in the context of Foucault’s work on surveillance, such diaries could be seen as mechanisms of power, increasing the power of teachers relative to students. At a more pragmatic level, without boundaries journals can lead teachers into arenas beyond which they have expertise. There are clearly hazards in teachers
utilising contrived forms of reflection in teaching and assessment. However, as the case studies in part two aim to demonstrate, imaginative and effective teachers can facilitate learning experiences as well as thoughtful reflection on such experience.

The work of David Boud (1993) and his colleagues places learning in context as a holistic activity that connects with people’s life experience. Learning is therefore recognised as constructed in a social, economic and cultural context. There is recognition that learning also relates to the personal, feelings and emotions, the affective domain as well as the cognitive. This is what is referred to as the holistic process (Boud 1993:12). Boud emphasised the value of learning from the experience of others, of sharing experience and exposing ideas to the critical gaze of the other. He argued;

We need, as learners, appropriate support, trust and challenge from others. This can enable us to continue our tasks when they seem too much for us or when we get blocked (emotional support), to do things in more productive ways (practical support) or to challenge the assumptions of others (political support). We also need to be challenged so that we do not fool ourselves with our own distorted assumptions or fail to consider new information which is outside our present range of experience. At times we need self-chosen groups of people similar to ourselves to support and challenge us, for example those composed only of women. But in other circumstances, as Miller illustrates, diversity and difference of experience is necessary to move beyond what is taken as given. (Boud 1993:15).

It is the value of engagement with the ‘other’ that was argued to be underestimated in the work of Schon and to a much lesser extent that of Paulo Freire’s concern about learning from the text of others, though dialogue was obviously central to Freire’s position. The engagement with difference and the acknowledgement of diversity through communicative discourse connects with critical social theory and the Habermasian idea of ideal speech situations. It is a key theme in the perspective on reflective learning being developed here.
In his 1998 seminar at Surrey University, David Boud acknowledged a theme of reflective learning that is focused on individual identity and the social and political context. He quoted the work of Giddens and Kemmis, both of whom are explored in detail in this thesis. Boud noted a possible connection between the social science use of the term reflexivity and the concept of reflective learning, adding that these concepts occupy different subject territories that do not interact. As demonstrated in earlier chapters, the two concepts are connected and this thesis aims to demonstrate that these subject camps can connect and interact. Such connections reinforce the argument about the holistic nature of reflective learning. Reflection of experience has been demonstrated to be fundamental to the makings of modernity, late-modern analysis and learning itself; it permeates the essence of human ‘being’ and our social context.

**Jack Mezirow**

David Boud’s account of reflective learning is clearly one similar to that which is presented here. Like Boud, Mezirow also acknowledged his debt to John Dewey and presents a similar analysis of the relationship between education and the creation of an improved society. Mezirow (1990) draws on critical social theory and presents the argument that authentic dialogue and communicative discourse are essential elements in adult education. Mezirow is acutely aware of the social context and how social theory relates to learning. Like Freire, Mezirow looks to education as a vehicle for emancipation and social improvement. Despite his psychological orientation to learning and freedom (Jarvis 1995:96) Mezirow’s approach is similar to the late-modern position of Anthony Giddens in that he recognises the imperative of reflection in a period with a rapid pace of change (Mezirow 1990:5) though it should be noted that the late-modern discourse developed (in English) a little after Mezirow’s analysis. The pace of change is seen as providing an increased need for problem solving skills as people are confronted with new or changing conditions. It is the confrontation with change or a ‘disorientating dilemma’ that for Mezirow can predispose a person to learning. Such a dilemma can be a life crisis, where past experience alone is not enough to
deal with the reality confronted. In the Paradoxes of Learning Jarvis talks of a similar process whereby “Disjuncture makes learning possible” (Jarvis 1992:83).

Mezirow presents a hierarchy of reflection with seven levels, the first level being ‘reflectivity’ whereby the learner is simply aware of meanings, perception and behaviour and the final level being ‘theoretical reflectivity’ where the learner can reflect upon and evaluate theoretical perspectives (Jarvis 1995:96). Mezirow is most interested in the higher order levels of reflection, as it is these that provide critical reflection and have the potential for transformation. In an interesting paragraph from “Critical Reflections in Adulthood” Mezirow contrasts the higher order reflection with reflexivity.

If reflection is understood as an assessment of how or why we have perceived, thought, felt or acted, it must be differentiated from an assessment of how best to perform these functions when each phase of action is guided by what we have learned before. Simply reflexively drawing on what is already known in order to act is not the same as reflection. (Mezirow 1990:6)

I am not sure that reflexivity is used here in the manner in which it is in social science. However, there is a similarity with Beck’s position which makes a distinction between reflection and reflexivity, which I challenged earlier for having a different understanding of reflection from that found in education. Perhaps Mezirow has a different understanding of reflexivity to the social scientists? Whatever, there may be a distinction between reflexivity as a virtually automated response to our condition and the more radical and potentially transformative critical reflection that Mezirow views as desirable. Both Beck and Mezirow are optimistic about the future. For Mezirow critical reflection challenges the status quo and leads to emancipation and transformation.

The view adopted here is close to Giddens position who explicitly defines reflexivity in terms of reflection without recourse to levels or a hierarchy of reflectivity or predictions about where such reflection will take us. Reflection as discussed here is more inclusive, it is developed from Jarvis’s definition of activity that transforms experience into learning; it includes thoughtful actions.
that may or may not be a stepping stone to critical reflection and action or emancipation.

**Peter Jarvis**

Learning is therefore the process of creating and transforming experience into knowledge, skills attitudes values, emotions, senses, and beliefs (Jarvis 1999:40).

Peter Jarvis, like Mezirow, firmly locates learning in its social context and draws on a wide range of social theory and philosophy to support his analysis. His work shares the philosophical pragmatism of John Dewey and his approach to reflective learning is reflexive; the theory itself is grounded in theory, practice and reflection. The late-modern analysis presented by Jarvis provides a synthesis of many of the above themes and concerns. It was suggested earlier that the Kolb / Lewinian model of reflective learning may be too simplistic. This point of critique is a starting point for exploration of reflective learning presented by Jarvis. While acknowledging the value of Kolb's work to the advancement of learning theory, Jarvis provided a more complex and grounded model of reflective learning.

The critical observations that prompted Jarvis' research about the Kolb model include the possibility that effective learning takes place where the learner moves between the different elements of learning, as represented by the arrows flowing in both directions; rather than following the linear route of Kolb. The emphasis on concrete experience in Kolb does not give a full enough account of other forms of experience that can be a basis for learning; learning can be built upon the experience of others, a process Jarvis refers to as secondary experience that will be discussed below. A final point of criticism is that different approaches to learning are possible; such as unreflective learning through memorisation, but they are not evident in Kolb's model. The recognition of different approaches to learning is a point of similarity between Jarvis and the approaches to study work of Marton, Hounsell and Entwistle (1984). I argue in the methodology chapter that the 'meaning orientation to study' presented by is similar to the process of
reflective learning. Peter Jarvis acknowledges these similarities and suggests that "the differences can all be accounted for by reason of different research methodologies which were employed for different purposes" (Jarvis 1987:27).

The research model Jarvis adopted to explore reflective learning might be described as action learning or action research, in which he "followed Kolb's learning cycle precisely!" (Jarvis 1987:20). In workshops, educational practitioners were encouraged to reflect on their learning and examine their learning processes. The exercise was completed following an introduction to learning theories. Through a process of snowballing the complexity of activity into larger groups of participants a model of the learning process was developed in each workshop. Each group's model was compared to the Kolb model and the model developed by the participants in the previous workshop. Modifications to the group's model were agreed in the light of discussion and consideration of the views of 'others', such as Kolb and the model of an earlier workshop. In all two to three hundred participants from a variety of post-school educational contexts contributed to the nine workshops between 1985-86 (Jarvis 1987,1995). The final model developed is presented in Table 4.1, although it has been subsequently elaborated upon even further.


![Diagram of the learning process](image)

Table 4.1
I participated in a similar workshop with Jarvis at the University of Surrey in the early 1990s where a strikingly similar model to the 1987 model emerged from the group of post-graduate students, many of whom seemed unfamiliar with the reflective learning literature. I have also repeated the exercise many times with my own students and gained similar responses, including a positive endorsement of the Jarvis model relative to Kolb. Indeed it was the strong connection with and endorsement from practitioner experience that was in part a stimulus to this thesis. There may be an element of reflexivity in the process, whereby the work of theorists permeates the experience and is then reported back as an interpretation of experience and thereby appears to confirm the theory. However, the model would still be reflexively grounded in the experience of practitioners. As the case studies in later chapters illustrate, when teachers use the model to consciously provide students with experience and opportunities to transform that experience into learning, teachers report improvements in student learning.

Jarvis identifies nine possible pathways through his model of reflective learning, three of which he describes as reflective learning. Although nine routes are identified, the model is not prescriptive. There is an explicit recognition of the complexity of experience and learning.

... it is possible to conceive of some situations where learning follows more than one of the routes at the same time, focusing on the same or different features of the same experience. (Jarvis 1987:26).

The three reflective learning pathways will be examined here. The first one referred to as 'contemplation' is closest to the reason and pure thought of philosophy identified in earlier chapters. It is said to differ from pure thought in that a conclusion is reached. The pathway for contemplation as reflective learning is:

A person has a situated experience (Numbers 1-3 of diagram)
Reasoning and reflecting
Evaluation
The second form of reflective learning was originally referred to as reflective practice (Jarvis 1987) and later reflective skills learning (Jarvis 1995). This form of reflective learning is similar to that of Schon outlined above; it is particularly relevant to the learning of practical, possibly vocational, skills. Reflective skills learning includes the learning of knowledge that underpins practice; it thereby connects with problem solving. The route through the model for reflective skills learning would be:

A person has a situated experience (Numbers 1-3 of diagram)
Practical experimentation
Reasoning and reflecting
Evaluation
Memorisation

The person changed and more experienced (Jarvis 1987:34)

The third form of reflective learning identified by Peter Jarvis is Experimental Learning. This form of learning connects directly with that of Francis Bacon, John Dewey and Kurt Lewin. It is similar to the Enlightenment conceptualisation of scientific process, but without the claim of universalism. With experimental learning, like science, theory is tried out in practice and adapted in the light of experience, thereby creating new theories for further experimentation. With experimental learning the pathway through the Jarvis model would follow:

A person has a situated experience (Numbers 1-3 of diagram)
Reasoning and reflecting
Practical experimentation
Evaluation
Memorisation

The person changed and more experienced (Jarvis 1987:35)
With reference to the work of Paulo Freire and Jurgen Habermas, the emancipatory potential of reflective learning is clearly acknowledged in Jarvis (1987). His position is late-modern and similar to the one developed here. It is not prescriptive and cautiously refers to the 'potential' of reflective learning: "reflective learning is potentially an agent of change, or what Habermas (1972, p310) refers to as 'an emancipatory cognitive interest'." (Jarvis 1987:28). This quotation does not suggest that reflective learning in itself is emancipatory. Jarvis' account is sensitive to the possibility of unintended consequences of modernity. As discussed earlier education has a propensity for both control and empowerment.

There is another respect in which Jarvis' (1987) account is close to Habermas and a late-modern position, that is the acknowledgement of learning from the knowledge claims of others. Experimental learning, for example, encourages the active engagement with theory. Not a passive acceptance of theory but more a dialogue or learning from the experience of others. Peter Jarvis captures the ethos of his position succinctly in the preface to a later book.

The book is written for practitioner-researchers; I hope that it does justice to the role they play. In keeping with the philosophy of the book, I urge you to test it out – use what works for you and forget the rest. I hope at least some of the ideas expressed here will prove both useful and relevant. (Jarvis 1999:xiv)

With respect to learning from the experience of others, Jarvis makes a valuable distinction between learning from primary and secondary experience. Primary experience has been a preoccupation of much of the work on experiential learning. Schon in particular made a virtue of the practitioners primary experience. Learning from experience, experiential learning, often refers to learning from the primary experience of the individual (the self). Such experience could be gained at home, in work or education; it occurs through all aspects of day to day life. It can be through group interaction or individually. Primary experience may also be gained through
structured educational activities such as practical, visits, work placements, role-plays and simulation.

Learning from secondary experience is common in educational settings. This involves learning from the experience of others. Secondary experience is gained through language; it can be gained through lectures, debates, discussion, and the use of any audio-visual media including books, broadcasting, film, and information technology. It is most effective when communication creates a dialogue, is genuinely a two-way exchange of experience and understanding; such dialogue and interaction are essential to reflective learning from secondary experience. Reflective learning from secondary experience is more likely to occur when the learner thinks, asks questions, tests the ideas and searches for meaning even truth. Barnett argued that such learning is the essence of higher education. Locating his work, like Jarvis, in the philosophical tradition of Habermas, Barnett provided a useful index of six minimum conditions that constitute the processes of higher education. These should promote:

- A deep understanding by the student of some knowledge claims.
- A radical critique, by the same student, of those knowledge claims.
- A developing competence to conduct that critique in the company of others.
- The student’s involvement in determining the shape of that critique (i.e. some form of independent inquiry).
- The student’s self reflection, with the student developing the capacity critically to evaluate his or her own achievements, knowledge claims and performance.
- The opportunity for the student to engage in that inquiry in the process of open dialogue and co-operation (freed from unnecessary direction). (Barnett 1990:203).

There are similarities here between the approach to reflective learning provided by Jarvis and process of higher education identified by Barnett, though perhaps Barnett makes a mistake that Jarvis studiously avoided.
Jarvis does not make a distinction between how different sections of the population, children and adults for example, learn. Barnett’s account identifies specific processes as the preserve of higher education. A question I will tentatively ask here is whether 'The Idea of Higher Education' (Barnett 1990) is unique to higher education or are these aspirations equally valuable as an 'idea of education', whether in schools, colleges or any other educational organisation? Whatever, secondary experience is clearly central to contemporary educational experience and perhaps its importance is underestimated or undervalued in some accounts of reflective learning. As argued above, the logic of Bauman’s post-modern ethic could be argued to be engagement with the ‘other’ of which secondary experience is clearly a part. Jarvis reasserted the importance of both primary and secondary experience in his work on practitioner researchers.

Through learning from practical experience, practitioners take the content of what they are taught and what they acquire in practice, and build their own theory. This theory is pragmatic, necessarily dynamic, and relative to the practice situation… (Jarvis 1999:49).

Usher and Bryant

The works of Usher, Bryant (1989) and with Johnston (1997) have similarities with the position adopted here and with that of Jarvis. A difference is that Usher, Bryant and Johnston have adopted post-modern discourse as their framework of analysis. Although the current epoch is characterised as late-modern in this thesis. Usher and Bryant proclaim their approach to be philosophically orientated and pragmatic (1989:4). They challenge the notion of foundation disciplines: the conventional positivist relationship that privileges theory and research over practice experience. The metaphor of the ‘captive triangle’ (1989) represents the conventional positivist model where theory and research represent the two foundations which are simply applied to the apex (or superstructure) practice. The triangle therefore consists of theory and research at the base, which are simply applied to practice at the apex.
Usher and Bryant do not suggest that the 'captive triangle' could or should be dispensed with. Instead they talk of an opening up, changing the relationships between theory, practice and research.

The elements of practice, theory and research will always be in some relationship with one another. The important thing is not to privilege any one element by treating it as foundational. (Usher and Bryant 1989:5).

In a sense theory, practice and research are privileged as constituting a field of study. This could be viewed as a revised Enlightenment construction of knowledge, perhaps critics of reflexive modernity would label it as neo-modern (Lash et al 1996), being more sympathetic to the reflexive modern position, they avoid a relativistic position (one that could be termed post-modern?) which reverses the privileging of theory with the privileging of practice. Usher and Bryant discuss the need to avoid the morass of relativism and with reference to Bernstein's interpretation of Kuhn that "Practical reasoning is concerned with interpretation, understanding, and justification - through communication and dialogue" (1989:22). This is a pragmatic position with similarities to Habermas and perhaps Karl Popper: "The reasons, however, are needed to make a good case rather than establish unassailable foundations." (Usher and Bryant 1989:22). Their emphasis on interpretation in the social context is similar to the structuration process and double hermeneutic of Giddens. For Usher and Bryant and for Giddens there remains a place for theory as representation and explanation.

The relationship between theory and practice is then not one where the former is applied to the latter, but where representation and explanation can assist judgement, interpretation and understanding. (Usher Bryant 1989:93)

They add that "the engagement between formal and informal theory has to be a two-way traffic" (Usher and Bryant 1989:94). If the captive triangle could be represented by arrows flowing from theory and research towards the application in practice, a more open relationship could be represented with the arrows flowing in all directions, though with this representation the triangle would still appear relatively closed and independent of context.
The account of Usher and Bryant is informed by and reflects many aspects of social theory; they quote the work of Kuhn, Bernstein, Habermas, Giddens, Rorty and Gadamer (Usher and Bryant 1989:39). Yet having presented the above sociological arguments a different caricature of sociology is presented in the critique of sociology as a foundation subject. They build this critique on the basis of an examination of “questions a sociologist might raise, and the types of theory and method that may be brought to their understanding…” (1989:57). Having presented in earlier chapters the arguments of actual sociological theorists, Usher and Bryant then suggest a sociologist ‘might’ construct a sociological interpretation of adult education differently. They replace a comprehensive analysis of questions sociology as a subject raises with a series of questions a fictitious sociologist might ask. These hypothetical questions are then used as a basis for attacking the subject as a foundation discipline (Usher and Bryant 1989:57-58). This represents an artificial construct of sociological and non-sociological questions, since the central argument that sociology, psychology or philosophy should not be privileged as foundation disciplines stands without recourse to a critique of any of the disciplines themselves. The approach developed here is, in broad terms, consistent with that of Usher and Bryant, although more open to engagement with other subject disciplines, as the ‘other’ and valuable knowledge forms. This thesis actively seeks to draw together the connections between post-compulsory education and social theory, a process towards which Usher and Bryant seem disparaging (1989:62). They suggest foundation subjects produce a theory-practice divide between the experience of practitioners and insights offered by social theory. A starting point of this thesis is the striking resonance of social theory with this practitioner’s experience. Paradoxically, much of what Usher and Bryant have written reinforces these very affinities; their approach ploughs some of the same fields of social theory as those represented here.

In arguing for reflective and critical practice they argue “It simply means that we have to recognise our situatedness, and be prepared to engage in dialogue with our situation (with ourselves, and others) and with knowledge in
its variety of forms." (Usher & Bryant 1989:5). The awareness of context, the more democratic and open relationship between theory, practice and research is a move away from simplistic Enlightenment modernity, where theory and research became, in Bauman's terms, the legislators, or 'priests of science'. This aspiration to a more reflective and critical practice is also consistent with the democratisation of risk society advocated by Beck (1992). It is a reflexive modern or late-modern position. With the work of Usher and Bryant on the one hand and Jarvis on the other we have a discourse in education that raises many of the issues identified in later developments in social theory as reflexive modernisation.

**Beyond Linear Learning?**

Crude interpretations of Enlightenment modernity or science produced a confidence that through scientific investigation humankind could find universal solutions. In twentieth century economics this manifested itself in the dominance of Taylorism and scientific management, perhaps the defining feature of the Fordist mode of production. Similar themes have permeated education and training. In the UK National Vocational Qualifications have been said to represent Fordist qualifications in a Post-Fordist world, with theoretical origins in behaviourism, scientific management and functionalism (Dyke 1996). The current Government is currently investing in information and learning technology and commissioning online learning material through agencies such as the University for Industry, yet a great deal of computer-based training material follows a linear, assembly line, mode of learning. This is built on behaviourist principles of atomised experiences that need to be completed in a specified order before the individual is positively reinforced and permitted to move on. There is a stark contrast between the method of learning promoted on computer-based tutorial packages and the experimental and pragmatic way in which most people teach themselves. The action learning cycle of ideas and planning followed by active experimentation, reflection and action seems far more representative of actual approaches to learning, particularly when accompanied by dialogue.
with others such as teachers and peers. The case studies in part two illustrate this process.

Yet the reflective learning cycle itself at one level is also linear, prescribed and a universal learning method or model. This is particularly the case with the Kolb/Lewinian model in which the arrows flow in one direction, with learning as one way traffic. Kolb acknowledges that there are different learning styles and the possibility of different starting points. In the work of Honey (1986) a whole industry has been built up aimed at capturing the human experience of learning and labelling learners individual styles in relation to the four elements of the Kolb cycle. What is interesting about the Jarvis and Usher and Bryant models is that both recognise the complexity and diversity of human learning. They are not prescriptive but offer interpretative models that aid understanding and demonstrate possibilities. When I have worked with practitioners on the Kolb model, groups often suggest improving the model by having the arrows flow in both directions. The Kolb pathway is seen as logical and an effective way of learning, but not the only possible route to reflective learning. A student once suggested that the Kolb / Lewin model should be viewed as a sparking chamber in which the learner makes contact with each point, but not in any specified order. This sparking chamber of learning is in essence non linear. It has similarities with the Jarvis and the Usher and Bryant models of reflective learning, it is more flexible; it touches on the key elements of primary and secondary experience, reflection and action. The Jarvis model in particular recognises a variety of possible learning pathways. The complexities, diversity, risk and to some extent the unintended consequences of learning are evident in this account. Usher and Bryant are also critical of the natural science model, which they characterise as linear. In its place they advocate research as social practice guided by paradigms. Their critique of natural science leads them to an "interpretative model which places practice, theory, and research in social contexts and stresses the importance of hermeneutic understanding.” (Usher and Bryant 1989:6).
Reflective learning themes

Reflection on experience is a key philosophical theme a feature of Enlightenment thinking and thereby characteristic of modernity itself. A common analogy in reflective learning is that of scientific method, of testing ideas in practice rather than deferentially accepting received wisdom as given. Dewey advocated a form of experiential, active learning by doing; Lewin’s method is also scientific in orientation, and experimental learning is one form of reflective learning recognised by Jarvis. While reflective learning is to be found in Enlightenment traditions, pragmatism rather than positivism is more representative of the philosophical orientation of reflective learning literature. The empiricists of the Enlightenment were also aware of the limitations of their approach, but pragmatic in advocation of empiricism; examples of such pragmatism can be found in Hume and Locke.

The endorsement of scientific method that can be found in reflective learning is tempered by an acknowledgement that knowledge is socially constructed, it is contingent, open to change in the light of new experience. In this sense reflective learning has moved beyond positivism and is late-modern. There is no pursuit of universal truth; with a modernist privileging of scientific methods of enquiry. Dewey was essentially pragmatic in his enthusiasm for scientific enquiry. In reflective learning formal theory is to be tested in action and judged by its usefulness in practice; praxis is a theme in Dewey, Freire and Kolb. There are also strands of thought in reflective learning that privileges practice and primary experience over the secondary experience of others, where secondary experience is viewed with deep scepticism. The reflective learning advocated here follows the traditions of Dewey through to Jarvis and Usher and Bryant. Here theory, practice and reflection are treated more equally, as mutually interacting and through transformative activities such as dialogue with the experience of others, theory and practice are reflected upon, translated into frameworks for knowledge, understanding and future action. Received wisdom is acknowledged and valued as another form of experience; it is not ‘deferred to’ but engaged with, open to question and testing in new contexts.
Some varieties of reflective learning are more prescriptive than others; Lewin and Kolb tend to advocate their own method. Other writers such as Jarvis, Boud, Usher and Bryant are less prescriptive; these writers reflexively accommodate late-modern concerns. Reflective learning is not presented as a form of linear learning, but as configurations of possibilities, frameworks of understanding that readers are encouraged to adapt and challenge. To use a computer analogy, these late-modern variants of reflective learning present open systems that practitioners are encouraged to adapt to their needs. Their approach is essentially democratic rather than top down, closed and hierarchical. Democracy and the potential for freedom and emancipation to be promoted through education is another key theme in the literature on reflective and experiential learning. This was the starting point for Dewey and it is a tradition that permeates through to contemporary writers. It is also a central theme of the late-modern social theory such as that on reflexive modernisation. For Beck (1992) there is an urgent need to promote the democratisation of Risk Society and for Giddens this is a thread of his Third Way (1998).

Part one of this thesis presents a philosophy or sociology of learning. The themes of reflection in learning and reflexive modernity demonstrate two academic disciplines presenting a similar analysis of individuals in society from different perspectives. Reflective learning has developed reflexively within modernity itself to become perhaps a central strategy of adaptation in a world of rapid and widespread change. Late-modernity could be said to represent the coming of age for a reflective learning society.

Part two consists of case studies in action research where practitioners have been given a facilitative framework for using reflective learning in order to improve student learning. The understanding of reflective learning used as a starting point for the framework was that of Jarvis (1987), though in each case study the practitioner has adapted and interpreted reflective learning, as She/he understand it in her/his particular context. The aim in the following chapters is to provide practical examples of how the theories advocated here
have informed practice and supported student learning in post compulsory education.
Part Two. Praxis

Part one of the thesis presented a theoretical case for reflective learning and more reflexive education. It examined the social context of reflective learning, connecting reflective learning to modernity and social theory. The themes of reflection, learning and education are argued to have been central tenets of the Enlightenment, pertinent then and relevant today. The exploration of the social and philosophical context of reflective learning together present a case for the late-modern perspective that underpins this thesis. Earlier chapters considered examples of how these social and philosophical traditions have filtered into educational literature and argued that reflective learning could represent a form of reflexive education for late-modernity.

Part one of the thesis therefore presents a theoretical context and case for reflective learning. Philosophical, sociological, economic, environmental and educational arguments have been considered. Part two is concerned with the practical relationship of theory to practice. Case studies are used to illustrate reflective learning in practice. The action research attempts to utilise a methodology that is reflexive and appropriate in late-modernity. Parallels between the process of research and the reflective learning cycle are explicitly drawn; action research, for example, is an effective form of reflective learning for its participants as well as a means of gaining insight and understanding of practice.
Chapter Five: Methodology - The Research Paradigm

The advent of modernity produced the search for universal laws to be applied across time and space, although, as discussed in earlier chapters, ambivalence existed in the very genesis of Enlightenment ideas themselves. However, the late twentieth-century critique of the Enlightenment rejects universalism; instead it acknowledges and celebrates diversity, as Bauman concludes:

Contemporary humanity speaks in many voices and we know now that it will do so for a very long time to come. The central issue of our time is how to reforge that polyphony into harmony ... Harmony is not uniformity; it is always an interplay of a number of different motifs, each retaining its separate identity and sustaining the resulting melody through, and thanks to that identity. (Bauman 1995:284)

Complexity, uncertainty, risk, diversity and even chaos gives shape to the discourse that provides a late twentieth-century critique of the Enlightenment and provides an agenda for change. These ideas are not necessarily new, but seem more pertinent, more powerful as explanations of experience. As a discourse the Enlightenment critiques may be capturing hegemony. It is a discourse that provides the theoretical underpinning for the following exploration of research methods used in this thesis. This chapter will provide a rationale, a justification, for the methodology and locate the approach to research with reference to the paradigms identified by Egon and Lincoln (1998).

Underlying the discussion in this chapter is a (my) modernist preoccupation with a search for theoretical consistency, a working through of the arguments presented by different critiques and a search for logical and rational conclusions. With such a framework to writing it is hardly surprising that there is a reluctance to adopt a purely relativist or post-modern stance, though texts that construct a post-modern manifesto (Parker 1997) for
education ironically follow similar conventions. Post-modernism can lead one to adopt a purely relativist, subject centred position, an approach that risks throwing out the baby of reflexive modernisation with the bath water of Enlightenment modernity. A post-modern approach that is fearful of adopting meta-narratives or giving status to any truth claims inadvertently preserves the status quo by not challenging existing power relations; it can thereby stifle critical engagement with society. However, powerful critiques of Enlightenment modernity exist. Richard Rorty, like Beck and Giddens, attempts to find a way of acknowledging these concerns and facilitating critical engagement. Rorty describes the narratives that might emerge from his approach;

They would just explain who was currently getting and using power for what purposes, and then (unlike Foucault) suggest how some other people might get it and use it for other purposes. (Rorty 1994:170).

Rorty reconciles the critical theory of Habermas with the post-modern critique of Lyotard by returning to Dewey and pragmatism (Rorty 1992). A pragmatism that allows for uncertainty prefers ‘to the best of our current knowledge’ and ‘beyond reasonable doubt’ to the confidence - even arrogance - of what Rorty and Lyotard perceived in meta-narratives. The pragmatism advocated by Rorty encourages dialogue and building of consensus it is self consciously similar to Habermas’s “consensus theory of truth” (Rorty 1992:69). In what Rorty (1992) describes as a Dewey-Habermas line rationality is defined as the achievement of consensus, not the application of criteria. In place of universalism and earlier notions of progress is a continuous learning from experience, self-doubt and scepticism:

But pragmatists are quite sure that their own vocabulary will be superseded - and, from their point of view, the sooner the better. They expect their descendants to be as condescending about the vocabulary of twentieth-century liberals as they are about the vocabulary of Aristotle or of Rousseau. (Rorty 1992:68).
Rorty appears to accept the concern of Habermas that the blend of post-modernism presented by Lyotard can produce neo-conservatism. In refuting any vision of Utopia, even that of liberal democracy, Lyotard produces a recipe for inaction where there is no challenge to the prevailing power relations or agenda for change. As Rorty concludes "No event - not even Auschwitz - can show that we should cease to work for a given Utopia. Only another, more persuasive, Utopia can do that." (Rorty 1992:69).

Rorty (1992, 1994) and Bauman (1993, 1995, 1997) define their approach as post-modern, Giddens and Beck (Beck 1994) talk of reflexive modernisation. All engage with Habermas and Rorty as well as with Dewey. All have rigorously explored the novelty of our times and advocated that we should engage with it; finding more democratic ways of living, learning and being. All could be described as producing critical theory. Collaborative action research provides a methodology consistent with the reflexive analysis presented by these theorists. It is a pragmatic approach to research that seeks to improve practice. Action research can engage the reflexivity of participants in the interpretation of existing theories, adapt them to their context and analyse the results. It has the potential to involve a broader constituency in the research process and strive towards a more democratic consensus of truth.

The late-modern approach to research adopted here can be located within the alternative paradigms of qualitative research identified by Egon and Lincoln (1998). Using their taxonomy, it has most in common with 'critical theory' together with a significant overlap with a 'constructivism' (Egon and Lincoln 1998:203). The importance given to historically situated structures, be they social, political, economic or for that matter philosophical, distinguishes the approach from a purely constructivist position. Indeed the earlier part of the thesis is explicitly concerned with making a case for reflective learning by sketching the landscape of these situated structures. The acknowledgement of reflexivity in the research process has similarities with Egon’s and Lincoln’s epistemology of constructivism “that sees knowledge as created in the interaction among investigator and

Aim or purpose of the enquiry

The study aims to discover whether reflective learning in education meets the needs of learners if we live in a reflexive modern society. It presents a theoretical and practical case for reflective learning with a view to improving student learning through more reflexive education that has the potential to nurture democratisation in late-modernity. The aims are characteristic of the transformative aspirations of critical theory; as an inquirer my role has been one of both instigator and facilitator.

The nature of knowledge and how knowledge accumulates

Knowledge is seen as situated in context (historical, cultural, economic) that changes over time. Knowledge consists of human constructions, that through a process of dialogue and interaction we strive to find through consensus. This consensus, limited or otherwise, provides a pragmatic basis on which more knowledgeable decisions are to be taken. The consensus and knowledge constructions can change over time; they are subject to continuous revisions. Using the Egon and Lincoln (1998) framework the position in relation to the nature of knowledge is therefore within the boundaries of critical theory and constructivism rather than positivism or post-positivism. Knowledge is taken to grow and develop through a dialectical process that provides for more informed insights over time. Generalisation is possible within a context. This is a position consistent with critical theory, though the constructivist position on the accumulation and transfer of knowledge through experience and by using case studies is also acknowledged.
Criteria for judging the quality of an inquiry

The thesis does not attempt to find iron laws that are replicable. As in the tradition of critical theory the analysis seeks to locate reflective learning in an appropriate historical, social, cultural, and economic context. The overarching aim is towards praxis, to promote improvements to practice, to stimulate action, facilitate and reflect upon change. The study seeks to give voice to the authentic experience of practitioners who are trying to improve their practice. By gaining an understanding of the experience of others the inquiry opens up transferability, it enables, empowers, others to engage with such experience and possibly adapt it to their context.

Values, voice and ethics

The notion that inquiry can be value free is not accepted here. The late-modern perspective adopted explicitly attempts to situate the inquiry in context. The attempts to utilise participative, more democratic, methods of enquiry illustrate the influence of values on the research process. The case studies aim to present the experience, views, and voice of practitioners. The role of the inquirer was seen as that of participant and facilitator, possibly interpreter, rather than a detached researcher or legislator whose hidden eye has sought to examine research subjects. In reality, I was in a more authoritative role than the research participants. In collaboration with the participants I initiated and facilitated the action research with a view to improving student learning. The nature of this research relationship places the research more clearly within the Egon and Lincoln (1998) description of critical theory. However of the two emotive terms used by Egon and Lincoln to describe the inquirers voice in critical theory as either “transformative intellectual” or in constructivist theory as “passionate participant” (1998:215) the latter is clearly preferred here.

There is an ethical dimension that underpins the aims of the thesis; that is to improve student learning and provide for a more reflexive form of education that may facilitate democratisation. There has been a concerted effort to make explicit the values, theories and assumptions that underpin the thesis.
There is a correspondence in the approach with Egon and Lincoln's account of ethics in critical theory as:

Ethics is more nearly intrinsic to this paradigm, as implied by the intent to erode ignorance and misapprehensions, and to take full account of values and historical situatedness in the inquiry process. (Egon and Lincoln 1998:215)

Reflexivity and educational research.

In late-modernity non-reflective education will quickly find itself out of step with the needs of reflexive modernisation and the cognitive demands of more reflective individual adult learners. In order for individuals to survive in society, to cope with the pace and scope of change, they need to become more reflexive, they need to learn. Reflexive modernisation creates the disjuncture that Jarvis argues makes learning possible “disjuncture occurs whenever there is a lack of accord between the external world experienced by human beings and their internal biographical interests and knowledge” (1992:82). In Risk Society reflexivity can be equated with higher level cognitive skills and reflective learning; this is confirmed by Lash and Wynne (Beck 1992:8) in the introduction to Beck’s “Risk Society”. Jarvis is more cautious as to whether or not change and disjuncture will result in learning, but argues convincingly that “change then is one of the conditions of the modern world, and these conditions themselves fuel the fire of lifelong learning” (1992:84). The changing context of modernity has implications for the shape and form of education and learning. Consequently, it also impacts on educational research. Approaches to research need to acknowledge the impact of reflexive modernity both on the processes and outcomes of research. Are there particular research traditions that provide more theoretical coherence, that chime in with the critique of traditional modernity theory provided by reflexive modernisation and even post-modern approaches?

The centrality of reflexivity in social research has been acknowledged and the positivist assumption that researchers can place themselves in a purely
objective position outside the social world that they study is rejected. A reflexive position accepts that the interpretation and meanings observers bring to a situation are shaped by their experience of the world, they are influenced by their biography and context. Studies of scientists in action provide examples of how the social context of science influences what scientists ‘see’ (Lynch 1983). Prior experience and context in which the scientist worked provided a lens that distorted the positivist claim to objectivity. Dewey, although an advocate of scientific method, also recognised these problems with objectivity (Meittinen 2000).

The reflexivity is inherent in the research process itself. Rather than resulting in description of a reality, research influences it. The process of conducting research changes the reality it seeks to describe. This is not just through a simple form of experimental or Hawthorne effect, but because of the parallels between the research process and learning itself. At one level research participants may be reflecting on their experiences in a manner they are unaccustomed to. Interviews, for example, are not an everyday form of social interaction. If reflection on experience is a basis for learning (Jarvis 1987) then research itself can form a learning experience for both the researcher and the participant alike. A frequent outcome of reflection and learning is that “the person is changed and more experienced” (Jarvis 1992:71). Research can therefore represent a form of learning, development and change for research participants as well as the researchers. The research cycle has parallels with the learning cycle: both require reflection on experience, an axial point at which learning is said to occur. The reflection that permeates research and educational practice corresponds with the reflexivity that Beck and Giddens (1994) characterise as reflexive modernity.

The acknowledgement and acceptance of the reflexive nature of social research provides one step towards minimising any negative or ethical consequences of inquiry. Martin Hammersley and Paul Atkinson examine reflexivity in social research and conclude;

Reflexivity provides the basis for a reconstructed logic of inquiry that shares much with positivism
and naturalism but goes beyond them in important respects (1995:21).

The use of reflexivity by Usher et al (1997) is similar to that defined as reflexive modern by Ulrich Beck, Anthony Giddens and Lash (1994). Usher et al claim that “Post-modernism highlights the need for science to be much more varied and self reflexive about its limitations.” (1997:206), an argument that is central to the critique offered by Beck (1992) and Giddens (1990, 1991) and Béck, Giddens and Lash (1994) all of which adopt a reflexive modern position. Judging by their text and bibliography, Usher et al (1997) had independently arrived, under a post modern banner, at conclusions consistent with the late-modernity thesis:

We have seen how post-modernism problematises the representations of research, which is supposed to go beyond the limits of what is known, but is trapped by the limits of its own traditions, the conventions of its own text. ... This is the conundrum of reflexivity, which we try to practice in our own teaching and research. Critical reflexivity acknowledges the conundrum. (Usher, Bryant & Johnston 1997: 232).

The reflexive modern position of Beck and Giddens has always held a position that, with self conscious reflexivity, acknowledges a degree of relativism and the varied context provided by time and place (Kumar 1995:199). A similar Enlightenment critique permeates the differing varieties of late twentieth-century analysis. It is for this reason that caution has been used in adopting the specific labels of 'prefixed' modernity, as Kumar notes:

whether we call ourselves neo-modernist or post-modernists; whether we think we live in post-modernity or as Giddens and Beck would have it in 'late' modernity or 'radicalised' modernity, the important thing is we recognise the novelty of our times. (1995:200).

**Reflexive strategies in educational research**

Novel times call for a fresh and innovative appraisal of research methods. What forms of inquiry go beyond the Enlightenment tradition and
acknowledge the importance of reflexivity? Such a form of inquiry would need to reject simplistic positivist notions of objectivity and acknowledge the potential impact of research on the reality it seeks to study. It would not treat knowledge as absolute, but require what Carr and Kemmis refer to as a dialectical method (Hammersley 1993:235), a method that allows people to theorise and revise these theories critically in the light of new experience. In a period of uncertainty and risk it has been argued that a process of democratisation, a broader constituency of decision making, is desirable (Beck 1992). The critics of the Enlightenment, provided by late and post modernity theses, do not treat knowledge as certain, external to the social world and waiting to be discovered. These approaches to knowledge do not rely on ‘experts’ alone to make judgements that have consequences for all. Positivism, and to some degree interpretative research, has had a tendency to treat people as phenomena or subjects to be studied and understood. These traditions have produced knowledge and understandings that are external to the participants. Can a more reflexive approach to research be more democratic? Can it be genuinely participatory, involve participants in the process and outcomes as equals?

Action research provides a research tradition that rejects simplistic positivist notions of objectivity. It does not deny the impact of research on the reality it seeks to study; instead it has a practical problem-solving ethos that actively seeks to improve practice and thereby provide a reflexive project for both researcher and research participants. Carr and Kemmis argue that it is a process whereby the action researcher “reflexively engages the world to change it and is reflexively changed in the process” (Hammersley 1993:236). The democratic and participatory aspirations of action research mirror those of ‘radicalised’ (Kumar 1995:200) forms of modernity that can be found in Beck and Giddens. As Carr and Kemmis argue “Action research is research into practice by practitioners, for practitioners” (Hammersley 1993:237). With action research there is a body of epistemological literature about self reflective inquiry (Carr and Kemmis 1986:162) that is consistent with the more ontological discourse of late and post-modernity concerned with a self
conscious reflexivity (Kumar 1995:138-144). Reflective learning is arguably a form of reflexive education in a risk society (Dyke 1997). The self reflective inquiry provided by the action research tradition is a particularly reflexive method of research that could be said to have 'come of age'.

Carr and Kemmis (1986) represent educationalists writing from a critical theory tradition. They have celebrated action research as a research method appropriate to their theoretical perspective, a position of critical theory that is influenced by the work of Jurgen Habermas and has recently been labelled as “Neo-modernist” (Kumar 1995. Lash et el 1996). Yet educationalists using the post- modern label have also acknowledged the importance of reflexivity and argue that; “Reflexivity requires that theory and practice are mutually interactive and recognised as such.” (Usher, Bryant and Johnston1997:37).

Usher and Bryant (1989) also accept action research as an appropriate process of inquiry. Recently they have extended the approach in a way that develops features of the above discussion with a language of ‘emancipatory’ and ‘participatory’ research. These terms are used to describe approaches to research that are “overstepping the limits” (1997:191-203) of traditional research paradigms. Though they differentiate such approaches to research from what they strictly define as a post-modern methodology.

Collaborative and participatory research has been described as New Paradigm Research (Reason 1988). It is an approach that encourages those co-operating with research to be treated as research participants rather than the positivist view of them as research subjects. It is more democratic than more traditional positivist, or for that matter interpretativist, research.

Traditional research seeks to take something, find something out about its subject. To contrast it with collaborative inquiry, traditional research might be described as a form of expropriation, where the researcher offers nothing to the participant, except perhaps alienation from their contribution to the research. Collaborative research would appear to meet the criteria of being a more democratic and a more participatory mode of research, though more radical forms of collaborative research have been criticised for the gap between their rhetoric and reality (Usher etal 1997:195). The reality and
constraints of the wider research context can present barriers to the participative aspirations of researchers, but the new paradigm research does highlight important questions that are not usually at the forefront of research manuals. Questions about who sets the agenda, selects the methods, interprets the data and benefits from the process are bench marks for collaborative inquiry. (Usher and Bryant 1997:201).

Jarvis (1999) recognised that a consequence of late-modernity was the growth in the phenomenon of the practitioner researchers who are legitimising knowledge pragmatically, in the context of their practice. Such practitioner research is seen as particularly relevant to late-modernity, and a time of rapid and widespread change. Practice is now under a state of constant review being continuously re-examined in the light of new information. In a world of rapid change the use and development of pragmatic practitioner knowledge is on the increase. Practitioner knowledge is defined by Jarvis (1999) as having the following characteristics:

- It is based on experience of what works in practice.
- It combines knowledge of process and content, including knowledge of relevant academic disciplines.
- It is essentially practical rather than theoretical.
- It is dynamic, only valued as long as it works. (Jarvis 1999:46-47).

With practitioner knowledge there is a unity between theory and practice: theory is built upon practice experience and is sculpted in context. Perhaps a different emphasis to Jarvis (1998) is placed here on the role of secondary experience and learning from the other. This thesis accepts and values both secondary and primary experience. It attempts to demonstrate that reflective learning is legitimated by reflection on theory, practice, research and the prevailing social context. There is a thread between the philosophical origins of modernity, contemporary social theory and practitioner praxis.
Chapter Six: Methodology - The Research Strategies

In previous chapters the research methodology was explored and related to paradigms in qualitative research. This chapter considers the research strategies required to explore reflective learning both as theory enacted and as theory experienced by teachers and students. It provides an account of research issues related to case studies and action research. The rationale for the development of an Approaches to Study Questionnaire (ASQ) and design issues are also presented.

Action Research Aims:

These case studies derive from experience in initial teacher education and a commitment to reflective practice. An influence on the design was the Further Education Unit report by Graham Gibbs entitled “Learning by Doing” (1987). The report was based on Kolb’s learning cycle. In “Learning by Doing” Graham Gibbs (1987) provided interactive learning exercises and practical examples across subject areas and demonstrated how reflective learning could be applied in Further Education. He presented exemplars of how it could be utilised in theoretical, practical, academic and vocational subjects. The report has been used successfully by myself over a number of years with students on in-service teacher training courses in adult education and training. It is the experience of supporting teachers, to foster a reflective approach, that has in part prompted this research. Working with practitioners, a number of small scale action research projects into reflective learning have been carried out with a broad aim:

Can the application of reflective learning, by practitioners, improve student learning in post compulsory education?

From a positivist paradigm this research question would simply represent a broad statement of intent; it might be too vague. However, the approach to research adopted here is closer to what Egon and Lincoln (1998) refer to as critical and constructivist. As a starting point for action research, it fits the
process identified by Kurt Lewin where “Planning usually starts with a general idea” (Carr and Kemmis 1986:162) that requires further fact finding and evaluation. With action research the general aim provides a basis for early action and evaluation; the cycle of planning, action and evaluation, itself, helps to define the objectives and structure the research questions in a much more dynamic way than, for example, a hypothetico-deductive model would suggest. Carr and Kemmis argued that the process has parallels with management or military strategic action:

composed of a circle of planning, executing, and reconnaissance or fact finding for the purpose of evaluating the results of the second step, for preparing the rational basis for planning the third step, and for perhaps modifying again the overall plan. (Carr and Kemmis 1986:163).

In this sense, action research, as self-reflective enquiry, differs from more positive traditions where precise objectives are clearly set and followed through from the outset. Carr and Kemmis argued that as well as to improve practice, another aim of action research is to involve participants in the research process (1986:165). Such involvement includes participation in the planning, execution and analysis of research. It therefore requires a level of openness and flexibility in the development of research questions.

In late-modernity involvement, engagement with the wider issues of a risk society, democratic or otherwise, is even more pertinent than before. Reflexivity permeates all aspects of living in late-modernity. Such reflexivity extends to research; it actively forces involvement, engagement with the research by research participants and thereby heightens the reflexive nature of social research identified by Hammersley (1995). Action research can harness the reflexivity as a valued and more democratic contribution to the research process. Flexibility is necessary to allow research questions to emerge, change and adapt through the cycles of planning, action, observation and evaluation.

Cohen and Manion (1989) identify three modes of action research. With the first approach practitioners, working in isolation to improve their practice,
carry out the action research. Here the teacher would adopt an innovation in teaching and learning then evaluate the relative success or failure themselves. The teacher is practitioner and researcher at the same time, conducting action research that is truly self-reflective inquiry. Control of the whole process lies with the teacher, they define the problem and the solutions as they see them through reflection on their own practice. This first tradition of action research does not provide collaboration, involvement or discourse. If, by definition, research requires some level of discourse and exposure of ideas it could be argued that solitary, self-reflective enquiry is little more than reflective practice or even rational action rather than action research. Habermas notes the risks, “in the act of self reflection the subject can deceive itself” (Carr and Kemmis 1986:239).

Improvement and involvement are key features of action research. It is perhaps through democratic dialogue and discourse that the process of action research becomes research as opposed to reflective practice or just rational action. This tradition of action research follows the critical social theory of Jurgen Habermas and a dialectical view of knowledge. They argue:

individual thought and action have their meaning and significance in a social and historical context, yet, at the same time, themselves contribute to the formation of social and historical contexts. (Carr and Kemmis 1986:184).

It is a view that also has parallels with the double hermeneutic of Anthony Giddens which is at the hub of his theorising on reflexivity. Giddens noted the requirement of social scientists to understand and interpret the social world. These interpretations not only reflect the social reality but shape the perceptions and interpretations held in the world. The knowledge created by the social scientist can be a source of reflexivity and action. Such knowledge is not only a component of social reality, but may contribute to changing it. Action research aims to change, to bring about improvement (Hammersley 1993:236).
The dialectical view of rationality adopted by Carr and Kemmis perhaps leads them to conclude that action research is most useful where there is a learning community, when action research manifests itself in a group (1986:239). The second mode of action research identified by Cohen and Manion (1989) meets this requirement. Here the action research is pursued by groups of teachers working co-operatively and as equals, with or without the support of an outsider. The role of any outsiders, or for that matter powerful insiders, can determine how genuine the collaborative enquiry and democratic the research. For Carr and Kemmis (1986:142-143) the action research group should approximate to what Habermas would call an ideal speech situation, one free from all constraints of power and domination, a situation where people can have the same opportunities to engage with the action research discourse; the same chances to initiate, interpret, challenge, give reasons for their analysis and offer conclusions. It is the participatory and collaborative character which is at the heart of action research (Carr and Kemmis 1986:237). Control of the action research process must be in the hands of practitioners and not require direction from outsiders.

With the third mode of action research identified by Cohen and Manion (1989:220) teachers work with ‘outsiders’ or facilitators who may be researchers, advisors, sponsors or representatives of university departments. This model most closely resembles the approach adopted here. It is described as “potentially the most promising, and may also be the most problematic,” (Cohen and Manion 1989:221). Tensions between the perceptions of researchers and that of practitioners are one source of difficulty. A more serious problem concerns the role played by a facilitator, it can distort the essence of the participatory ethos of action research. This can in part be judged by the degree to which facilitators rather than practitioners own and control the action research. Carr and Kemmis (1986:241-245) distinguish between a number of forms of ‘facilitated’ action research; technical, practical and emancipatory.
Technical action research:

With technical action research the participants are essentially co-opted into a research project externally initiated and directed. The facilitator defines the issue and innovation, designs the research, analyses the data and ultimately reaps the benefits of the process. With technical action research the facilitator is most likely to set the criteria by which effectiveness of the innovation is judged. The balance of ownership and control of the project is clearly with the facilitator. A facilitator-dependent relationship exists as the practitioner does not have responsibility for the project. Carr and Kemmis provide a definition;

Technical action research occurs when facilitators persuade practitioners to test the findings of external research in their own practices, but where the outcome of these tests is to feed new findings into external research literature.... rather than the development of practitioners' own practices ..." (Carr and Kemmis 1986:202).

They clearly see technical action research as the least desirable action research scenario, since it limits the democratic, collaborative and participatory role of practitioner. However, they recognise that it has value and can produce improvements to practice, if the technical action research provides the initiative for teachers to take control of their own further action research investigations and assists them in developing their own research skills (Carr and Kemmis 1986:202). The primary limitation of technical action research would appear to be the levels of collaboration and involvement rather than the aim of improving practice. Carr and Kemmis appear to juxtapose theory and practice, in advocating practice-led research. They perhaps underestimate the extent to which practitioners can learn from prior experience of others, use theory as secondary experience to inform their own primary experience of the here and now. This thesis advocates a more equal symbiotic relationship between theory, as secondary experience, and practice as primary experience, one that attempts to open up Usher and Bryants' "Captive Triangle" (1989).
The second tradition of facilitated action research is referred to as practical action research. Here the facilitator enables the practitioners to formulate their own questions and research investigations. It "develops the practical reasoning of practitioners ... the facilitators role is Socratic." (Carr and Kemmis 1986:203). The aim of practical action research is the improvement of practice and practitioner understandings. The facilitator may work with individuals or groups of practitioners. Practical action research is said to differ from technical action research in that the frame of reference for research is open to negotiation and development. With practical action research they do not envisage the facilitator as offering advice, support and guidance in terms of research skills, scholarship or knowledge of similar action research projects. The facilitator is merely the keeper of the keys to the skills required for self-reflective inquiry.

The third tradition of facilitated action research identified by Carr and Kemmis (1986) is that of emancipatory action research, where the research process is primarily viewed as empowerment for practitioners. The language of empowerment, struggle, democracy, activism, oppression permeates the discourse. Here the research is concerned with social change and improvement. The challenge such research presents to the dominant discourse and the conflicts that are generated perhaps explains the fear of structural power and outsiders. This can engage with structural issues such as inequality and may therefore be perceived as 'subversive' by those whose power it challenges. In such circumstances concern about outside influences may be a necessary political reality. In contrast to the approaches outlined above, emancipatory research is sometimes accused of "privileging the critical without sufficient attention being paid to the processor specific local circumstances ..." (Usher et al 1997:196).

Emancipatory research follows the epistemology of Paulo Freire that research cannot be politically neutral, it either serves the oppressed or contributes to maintaining the dominant power. How the road to emancipation, or for that matter the destination 'emancipation', is determined
can be problematic for emancipatory research. The risk of 'enlightened' outsiders attempting to impose their 'regime of truth' remains.

The danger is that, in the name of emancipation, researchers (explicitly or implicitly) impose their own meanings on situations rather than negotiate these meanings with research participants. (Usher and Bryant 1997:196).

Carr and Kemmis emphasised that the facilitator role is collaborative and ultimately could be taken by anyone in the group. In establishing action research they identify a role of moderator “who helps practitioners to problematize and modify their practices, identify and develop their own understandings, and take collaborative responsibility ... “ (Carr and Kemmis 1986:205). Continued dominance by a moderator would ultimately undermine the collaborative ethos and aspirations of emancipatory research.

The proviso Carr and Kemmis make for research to be defined as action research is difficult to achieve. The wider benefits claimed for the approach may be even more elusive. Action research is said to be able to

... provide a basis for action to overcome irrationality, injustice and deprivation. It does so by creating conditions in which the self-critical communities of action researchers commit themselves to rational communication, just and democratic decision-making and access to an interesting and satisfying life for all. (Carr and Kemmis 1986:197).

Carr and Kemmis themselves have described their approach as Utopian. Martyn Hammersley suggested of their approach “is certainly Utopian in the sense of being of doubtful feasibility ...” (1993:226). Whether or not the action research carried out in this thesis can accurately be described as action research in Carr’s and Kemmis’ terms will be subject to evaluation when all the cycles of reflection are complete. The initial facilitative framework, outlined below, provided a basis of discussion and negotiation between facilitator and researcher. This framework could be perceived as practical action research, though the framework is only offered as a possible
starting point. It was anticipated that individual researchers would accept, adapt or indeed reject the model and create their own. The facilitative framework is aimed at developing practice, not simply feeding into external research literature. It is not imposed but negotiated with action researchers and is therefore more participatory than the label practical action research would suggest.

In some of the above accounts of action research one gets the sense that there is little value placed on co-operation or collaboration with a wider research community. This is confirmed by Hammersley who quotes Carr and Kemmis as an example of action research that aims to “... reduce the role of the non-teaching educational researcher to a subordinate one at the most” (Hammersley 1993:214). The ‘exclusive’ communities of action research advocated by Carr and Kemmis represent a form of syndicalism, democratic participation is celebrated but only within the immediate group. Does this provide too narrow a basis for the dialectics of reason? Is it a closed community of communication? Can such parochialism threaten the theoretical origins, origins so clearly associated with the critical theory and communicative action of Jurgen Habermas (Denzin & Lincoln 1994:67)? In asserting the primacy of the here and now practitioner experience a wider community of opinion and experience is viewed as a threat to authenticity, ownership and control of the action research. One consequence of such a protectionist outlook is a fear of strangers, with talk of ‘outsiders’ who are:

frequently regarded as ‘manipulators’ who are in fact responsible for the action taken by the group” (Carr and Kemmis 1986:201).

While recognising the hegemony of non-participatory research traditions and potential for unequal power relationships, the disdain for the prior experience of ‘outsiders’ at one level appears like a recipe for reinventing the wheel. It ignores what could be regarded as apriori, that people can learn from the experience of others. At another level it is an inward looking formula, an insular basis of ethics a long way from a concern for the ‘other’ (Bauman 1993, Jarvis 1997). It is a perspective that views strangers, ‘outsiders’, as
dangers, that encourages the action researchers not to engage with the other; let alone be concerned for the other for the other's sake. Does it provide for a habitus where the desires and interests of the practitioners alone take precedence over the wider community? It could be described as a further privatisation of experience where:

Unable to stop treading on each other's toes in the mega-community, we have stepped into our separate houses and closed the door, and then stepped into our separate rooms and closed the door. (Bauman 1995:45).

Carr and Kemmis are aware of some of these dangers and suggest that "...action research projects involve students, administrators, parents and others in all aspects of the research process ..." (1986:210). Here the concern is not with parochialism, but a response to fears that the interests of the teaching profession alone could dominate action research.

Another feature of the concerns about outside influence is the ambivalent account of structural power and individual action. Individual action is at the heart of action research that is until it is under the influence of 'outsiders' experience. It is as if the autonomous professional practitioners involved in systematic research of their own practice are likely to become the puppets of outside interests if they engage with the experience of others. 'Outsiders' are perceived as all powerful 'manipulators'. It is paradoxical that, when faced with outside influences, practitioners can be seen as passive victims of manipulation determined by structural influence rather than their individual action. It seems that the celebrated power of individual action is at constant risk, it quickly evaporates into fears of structural determination. The potential for relationships with outsiders to be symbiotic and a partnership of equals is not appreciated. Secondary experience, including that mediated by a facilitator, is central to reflective learning (Jarvis 1995). It can provide a source of shared expertise to be critically evaluated, accepted, rejected or adapted by the practitioner. It is possible, even probable, that practitioners can retain the power to judge what is applicable to their context, benefit from
secondary experience and not be completely seduced by the agendas of others.

Hammersley (1993) makes a number of related criticisms behind the assumptions of action research advocates. Firstly the approach privileges one stakeholder in education, the teacher as action researcher, above all other participants and interests. Educational research is said to be irrelevant because practitioners do not value it, with this argument it is as if practitioners alone are the only valid arbiters of the value of educational research. Such a narrow franchise for participation is in itself undemocratic. Secondly, that ‘insiders’ have overwhelming claims to validity compared to outsiders is also questioned. The validity argument suggests that knowledge is fixed, out there waiting to be discovered rather than constructed. In terms of ownership and control Hammersley suggested that teachers face a greater threat to the authenticity of their research from powerful insiders, line managers for example, than outside facilitators such as educational researchers (1993:219). Thirdly, Hammersley takes issue with the assertion that more conventional research is exploitative of teachers. He suggested that research is more usually a co-operative venture with access negotiated on relatively equal terms. Hammersley, however, points out that negotiation of permission for access is more likely to place the researcher, not the teacher, in a subordinate role. The question of expropriation or who benefits from the research process - teacher or researcher - is not seen as relevant to the outcomes in terms of the value of the research itself.

Carr and Kemmis are correct to point out the risks associated with facilitated action research, though the understanding of didactic, undemocratic facilitators who are keen to impose their own agenda and criteria on an action research group does seem a contradiction in terms. This would not be ‘facilitation’. Such research, as Carr and Kemmis point out, may be no more than applied research masquerading as action research. The action research approach adopted in this thesis can be described as facilitated action research. The author was a facilitator and had provided a facilitative research framework that action researchers adopted, adapted, rejected or
accepted as applicable to their context. The approach starts from Kurt Lewin’s principle that “There is nothing as practical as good theory” (Kolb 1984:9) and seeks to improve student learning by using models of reflective learning in post compulsory education. All action researchers volunteered to participate in action research with the general aim: to improve student learning by using models of reflective learning in post-compulsory education.

Those who participated in the study were past or present students of the facilitator, a Senior Lecturer in Education in a large FE/HE college. Despite the unequal positions of power and authority between researcher and facilitator the approach aimed to be democratic. It recognised that practitioners are the best judge of what will work or not work, what can be applied to their particular practice context. The researcher did not impose processes or criteria for evaluating the action research. Recognising that learning can derive from secondary experience and through a dialectic engagement with that experience, a facilitative framework of action research was presented to participants as a starting point for reflection and planning of their action research. That framework can be described as an initial research design, the planning stage for the first cycles of reflection.

The research reported below examines a number of case studies in action research. Participants volunteered to try and improve student learning by using models of reflective learning. The outcomes of their reflective learning innovations are analysed and evaluated. The research method is discussed in detail in chapter seven, in short, participants were given an interpretation of Jarvis’ model of reflective learning and possible research frameworks. Participants were familiar with the concept of reflective learning and reflective practice, as these are central features of their own professional training as teachers, particularly Kolb (1984). How they chose to interpret and apply reflective learning was entirely up to the practitioner, with the facilitator acting as a sounding board for their ideas. The same was true of data collected to evaluate the effectiveness of the reflective learning innovation.
Case Studies

The use of case studies in action research is a key research element in the research strategy and one particularly relevant to late-modernity. Late-modernity is characterised as a period of rapid and widespread change, in such a world knowledge is transitory and changing, unique to its particular situatedness in time and place. Knowledge is increasingly gained in and through practice rather than pure research; "...we can no longer assume that research conducted in the past is replicable in the future." (Jarvis 1999:165). Knowledge is likely to be judged in pragmatic terms; if it works for one person it might work or be adapted by others in a different context. He argues that a consequence of these changes is the growth of practitioner researchers, ideas and innovations are designed, implemented, adapted and evaluated in practice. The growth of practitioner research is characteristic of reflexive modernity, it challenges the traditional divide, the triad of theory, practice and research, divisions that as Usher et al (1997) point out privilege one aspect of this triangle over another. Jarvis (1999:164-165) argues that research strategies such as case studies, action research and collaborative research have become increasingly relevant in reflexive modernity; they enable us to get closer to the transitory experience of increasingly reflexive practice.

A typical case study is a written narrative; it may refer to some real life event, situation, or experience. Yin defines a case study as:

A case study is an empirical enquiry that investigates a contemporary phenomenon within its real life context, especially when the boundaries between phenomenon and context are not clearly evident (Yin 1994:13).

Yin (1994:13) suggested that case studies are particularly useful when the boundaries of a case are not clearly defined and the context is of particular interest. Yin's emphasis is on the case and empirical inquiry, others have acknowledged the role of 'study' and connected the 'case study' more directly to learning. A case study is usually selected because it presents an experience in the form of a 'case' from which we can learn something.
The explicit connection between the ‘case’ and learning is made by Stake: “A case study is both the process of learning about the case and the product of our learning.” (Stake 1998:77). Jarvis (1999) extended this definition and argued that the processes within the case should also be included in the definition. Stake (1998) suggested that people and situations make up cases, processes do not. As Jarvis argued this would make case studies in teaching and learning somewhat vacuous. Stake’s exclusion of processes as “generalities rather than specificities.” (Stake 1998:87) does appear unhelpful, a little like providing a product, a cake with a list of ingredients, but no indication of how it was baked.

However, Stake explicitly connected case studies with reflective learning and relates this directly to Schon (1983) and reflective practice, preferring the word reflection to interpretation partly because it is suggestive of learning (Stake 1998:106). Case studies are also linked to reflection and critical theory by Carr and Kemmis:

In being ever reflective the researcher is committed to pondering the impressions, deliberating, recollections and records – but not necessarily following the conceptualisations of theorists, actors, or audience (Carr and Kemmis 1986). (Stake 1998:99)

Accounts of case studies as a method of qualitative research therefore correspond with the theoretical position and themes identified here with late-modernity and reflective learning. They are more that just a research strategy, as Jarvis (1999) argued; case studies are not simply research but similar to practice itself as in the examples of case conferences in social work. Jarvis (1999) draws direct comparisons with the working processes of medical professionals and the case study method. Such comparisons can be extended to teaching and learning.

Case studies also represent a technique used in teaching and learning appropriate to reflective learning. In this context Reece and Walker define them as “an examination of a real or simulated problem which is structured so that learning can take place and be reinforced” (1994:139). Case studies
can, empower students by giving them the ability to deal with a wide variety of issues and apply their knowledge and understanding to scenarios developed from experience. Case studies enable students to apply their knowledge to realistic scenarios and thereby ‘learn by doing’. Jarvis (1999:164) explicitly links research as a learning process, the use of case studies as a means of both research and reflective learning provide an example of how these processes connect. It is hoped that the case studies presented here as learning from research can also be used and adapted as future teaching and learning material. Merriam uses the term ‘case method’ (1995:109) to distinguish case study as research from the use in teaching and learning. It is important not to have “confused case study teaching with case study research” (Yin 1994:10), but perhaps it should also be noted that the two are not mutually exclusive. As Jarvis argued, the research process and learning are closely entwined. He provides a working definition of case studies that reflects a broad interpretation inclusive of research and learning.

I suggest that case studies are both about the process of learning about researching the specific phenomenon or phenomena under investigation and about the product of that learning and research. (Jarvis 1999:77).

The approach to case study here reflects that recognised by Merriam and Simpson:

In applied fields such as the education and training of adults, counselling, and vocational education, the case study has been used to describe and / or evaluate the efficacy of a new program or new approach to ongoing problems. (Merriam and Simpson 1995:111)

It is also possible to locate the use of case study here within other frameworks that describe approaches to case study. Stake (1998) identifies three types of case study the ‘intrinsic’ case study examines a case for itself, it is the case that is of primary interest rather than some other issue. The action research in Chapter Eight has similarities with what Stake refers to as an “instrumental case study; a particular case is examined to provide insight
into an issue of refinement of theory.” (1998:88). Clearly the action research was carried out with a view to improving student learning by using models of reflective learning. Stake also notes a third form, the “collective case study” (1998:89) where a number of separate cases are instrumentally studied. Collective case study is also a feature of the method used here where six case studies were examined as reflective learning in practice. Stake acknowledges that reports seldom fit such neat categories, these case studies in action research are presented as both intrinsic and instrumental cases.

The case studies in action research reported in this research are of individual teachers adapting a model of reflective learning to their practice. I acted as a facilitator of the action research carried out by each teacher. Both the teachers participating in the action research and I could be described as action researchers. For the purpose of this research the teachers conducting the action research will be referred to as ‘teachers’. I will be referred to in the first person or as ‘facilitator’. The term student refers to the students of the teachers conducting the action research. The teachers were encouraged to use the similar evaluation tools that would enable them to make an informed judgement about the outcome of the action research. One source of data, for example, was the approaches to study questionnaire completed by the teachers’ students. It was hoped that standardised evaluation tools would enable later cross case analysis by myself. In chapter eight the focus is the analysis and intrinsic understanding of each particular case. The emergent themes or collective case study are considered in the concluding chapters.

The Approaches to Study Questionnaire

As part of the data collection from the case studies in action research an approaches to study questionnaire (ASQ) was developed from existing instruments. The questionnaire was developed to provide the teachers with tools to evaluate their action research and with a view to possible collective case analysis. Parallels between reflective learning and the approaches to
study literature have been drawn. The questionnaire was designed to examine whether reflective learning produces a meaning orientation to study.

**Rationale: To establish whether reflective learning produces a meaning orientation to study:**

The ASQ provides a source of data that enables an evaluation of reflective learning. It was been developed to test the statement that *reflective practice produces a meaning orientation to study*. Reflective practice has been defined in terms of teaching and learning that is consistent with the model of learning developed by Jarvis (1997, 1996). Meaning orientations to study are defined in terms of the literature on students’ approaches to learning (Marton et al 1984). An approach to study is measured through student responses to the ASQ. In practical terms similar implications and recommendations for teaching derive from the student approaches to learning research and the reflective learning literature (Jarvis 1988 and 1996, Gibbs 1992). Theoretically there are also parallels between the phenomenagraphic approach of the ASQ (Marton and Saljo 1976) and the grounded theory of Jarvis (1988).

Jarvis (1988) uses the work of Marton and Saljo in developing his critique of Kolb. Both their research and that of Jarvis are similar and these are acknowledged by Jarvis (1987). The similarities include the acknowledgement that there may be more than one type of learning process and that approaches can vary with different learners (Jarvis 1987:7). Both the work of Jarvis and that of Marton and Saljo could be described as constructivist. From a constructivist perspective scientific explanations represent probabilities built upon the best guess in terms of existing evidence and experience. Kuhn (1962) argued that conceptual systems are constructed and, if they work, accepted until successfully challenged and paradigms shift. These explanations are open to change based on new knowledge and experience. According to Biggs constructivist perspectives on learning have the following features:
1. People actively construct knowledge for themselves

2. Knowledge is based on categories derived from social interaction not observation, it is the way you look at things as much as what you are looking at.

3. What is learned may not be what the teacher intends

4. What is learned depends on what is already known.

5. Learning is on going continuous and active. (Biggs 1993:22-23).

Other similarities between reflective learning and the student approaches to learning literature include emphasis on meaning, understanding and thinking. Both theoretical traditions also acknowledge the role of the social situation in shaping student experience. The differences, Jarvis argues, “can all be accounted for by reason of different research methodologies which were employed for different purposes” (Jarvis 1988:27). However, similarities can also be identified in the research methodologies.

Marton and Saljo (1976) carried out research into students' accounts of their approaches to study. From these accounts they developed the concepts of deep and surface approaches to learning. These concepts have since been refined by Entwistle and Biggs (Ramsden 1992:50-53) who provided a focus on general orientations to study: the meaning orientation associated with a deep approach and the reproducing orientation associated with the surface approach. Entwistle describes the research of student approaches to learning as “rigorous qualitative analysis” (Marton et al 1984:16), the primary research tool being interviews and questionnaires with students. Jarvis also produced his model of the learning process from accounts of adult students' experience. The model developed over a series of workshops where participants co-operated in the development of models based on their experience (Jarvis 1988). These phenomenographic approaches to research are contextually based and can be juxtaposed against more psychological
information processing models that tend to provide accounts of learning that are focused on internal cognitive processes. It is therefore clear that both the studies by Jarvis (1988,1996) and Marton (1976,1984) construct their theories of the learning process on the basis of others’ experience of learning. These approaches to research are rooted in the social aspects of learning and a focus on social interaction.

Noel Entwistle and colleagues (Entwistle et al 1979) developed the ASQ as a research instrument designed to measure student approaches to learning. The genealogy of the Approaches to Study Questionnaire (ASQ) can be traced to the phenomenographic research of Marton and Saljo (1976) who, from interviews with students, identified two key approaches to learning; the surface and deep approach.

The surface approach is;

the student reduces what is to be learnt to the status of unconnected facts to be memorised. The learning task is to reproduce the subject matter at a later date (i.e. in an exam).

The deep approach is;

The student attempts to make sense of what is to be learnt, which consists of ideas and concepts. This involves thinking, seeking integration between components and between tasks and ‘playing’ with ideas. (Gibbs 1992:2)

The ASQ variant used here has been developed from Richardson’s (1990) short form of the ASQ with thirty-two questions rather than the sixty-four used by Entwistle (1983). Richardson’s ASQ has been designed and tested in higher education. It has been adapted here for use with students in a further and higher education context including competence based education and training. The modifications to Richardson’s ASQ have been minimised in an attempt to preserve the original meaning of his questions. These modifications have been tested for reliability and replicability using similar criteria and quantitative methods to those adopted by Richardson (1990). The modifications were designed to work with students with a wide variety of
assessment and study demands, including courses with a large amount of coursework and assessment of performance evidence. This further education ASQ (FEASQ) is designed for use with students across the qualifications framework; for use in academic and vocational education including the outcomes based assessment of NVQ and GNVQ. This element of the research is the closest in style to what Carr and Kemmis refer to as technical action research. It utilises existing theoretical concepts and measurement instruments to try and provide some standardised data across the case studies.

In addition to meaning and reproducing orientations study there is a third approach identified with approaches to study a ‘strategic’ or ‘achieving’ approach and this is not used in the Richardson’s ASQ or the FEASQ. It has been argued that this third approach represents an attitude or motivational factor rather than approach to study and is not empirically justified (Richardson 1990). Richardson’s ASQ therefore focuses on the empirically more reliable concepts of meaning orientation and reproducing orientation to study; it is this approach that has been adopted here. The FEASQ therefore retains the four subscales identified with a meaning orientation to study and four subscales associated with a reproducing orientation to study:

**Approaches to Study Questionnaire Orientations and Subscales**

<table>
<thead>
<tr>
<th>Meaning orientation:</th>
<th>Reproducing orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deep approach</td>
<td>Surface approach</td>
</tr>
<tr>
<td>Relating ideas</td>
<td>Improvidence</td>
</tr>
<tr>
<td>Use of evidence and logic</td>
<td>Fear of failure</td>
</tr>
<tr>
<td>Comprehension learning</td>
<td>Syllabus boundness</td>
</tr>
</tbody>
</table>

(Richardson (1990:158))

The ASQ has been identified as a useful tool both for research into student learning and evaluation of teaching (Richardson 1990, Gibbs 1992).
Richardson has successfully applied his short version of the ASQ to Access students following the academic pathway in further education to degree level study. The minor changes to the wording of the adapted ASQ have been piloted.

Pilot Questionnaire

Richardson's short version of the ASQ was edited, with his permission, using a language judged by the author, in consultation with colleagues, that would be appropriate to students across the New Qualifications Framework. The revision is primarily aimed at vocational candidates in an FE/HE context; it is applicable to A'level, Access, Advanced GNVQ or NVQ Level Three and above. The questionnaire was piloted on thirty-five students with a wide variety of academic and vocational backgrounds, all of whom had recently achieved a Level Three Award. They were on the second year of an in-service competence based teaching certificate, a course with an ethos of reflective practice embedded in the course. The specific purpose of the ASQ and the underlying concepts were discussed after the pilot. Students were not identified on the questionnaire by name but coded by date of birth and sex; there were no duplicate birth dates. In a somewhat surprising coincidence with Richardson (1990:159) 71% of the pilot cohort were female and 29% were male (Richardson had 29 males and 70 females). The teachers and instructors in the pilot share a similar educational and training biography to the students they currently teach; many have NVQs and vocational rather than academic qualifications. The results of the pilot were then tested for reliability using a statistical analysis generated by SPSS and compared with the results of Richardson (1990). In response to the statistical analysis and verbal feedback from the candidates further adjustments to the FEASQ were made and the questionnaire re-tested for reliability.
Table 6.1 A Comparison of ASQ Mean Scores on a 5 point Likert Scale 0-4

<table>
<thead>
<tr>
<th></th>
<th>Meaning Orientation</th>
<th>Reproducing Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Richardson (1990:159)</td>
<td>43.39</td>
<td>34.23</td>
</tr>
<tr>
<td>Gibbs (1992:204)</td>
<td>38.16*</td>
<td>36.00*</td>
</tr>
<tr>
<td>FEASQ version I</td>
<td>46.4</td>
<td>32.16</td>
</tr>
<tr>
<td>FEASQ version II</td>
<td>48.00</td>
<td>32.64</td>
</tr>
</tbody>
</table>

* Scores are adjusted for comparison with 32 question ASQ

The mean scores from the pilot are consistent with the hypothesis that *reflective practice produces a meaning orientation to study*. To use a Popperian approach, the findings did not disprove the hypothesis. The mean scores for a meaning orientation are greater than the scores for a reproducing orientation; they compare favourably with the undergraduates studied by Richardson and even more favourably with the summary of scores presented by Gibbs (1992:204). A comparison of mean scores is provided in Table 6.1. The higher the score the greater the orientation to study. The scores are out of a maximum possible score of 64 for each orientation.

Table 6.2 compares the values for Cronbach's coefficient alpha between Richardson's study in 1990 and the first version of the FEASQ. Cronbach's coefficient alpha is used to evaluate the internal reliability of the questionnaire scales. All the alpha values are greater than 0.5 and therefore acceptable in terms of Richardson's (1990) criteria. The values for coefficient alpha are higher in the Richardson study of higher education students than in version I of the FEASQ, particularly so in the case of the questions designed to measure a reproducing orientation. Richardson also reports that the alpha scores for each study orientation on his second session were 0.61 for the meaning orientation and 0.67 for the reproducing orientation (Richardson 1990:160). These second figures compare more favourably with the FEASQ (version I) alpha score for a meaning orientation at 0.69, but are still higher than the FEASQ (version I) score of 0.53 for the reproducing orientation. In
the light of these findings and on the basis of feedback from participants, the questionnaire design was adapted and version II of the FEASQ administered.

Table 6.2 Cronbach coefficient alpha values for Richardson (1990:159-160) and the FEASQ.

<table>
<thead>
<tr>
<th></th>
<th>Richardson Session 2</th>
<th>FEASQ Version I</th>
<th>FEASQ Version II</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Meaning Orientation</strong></td>
<td>0.72</td>
<td>0.69</td>
<td>0.83</td>
</tr>
<tr>
<td><strong>Reproducing Orientation</strong></td>
<td>0.73</td>
<td>0.53</td>
<td>0.71</td>
</tr>
</tbody>
</table>

On examination of the correlation matrix values for the FEASQ version I, four questions were judged as unreliable, they were also queried in the feedback from participants. These questions were then rewritten and Version II of the FEASQ questionnaire administered approximately five weeks after the Version I. Both questionnaires were administered under similar conditions and with the same guidelines to the same group of people.

The results from the use of FEASQ Version II are outlined in Table 6.1 and Table 6.2. The mean scores again were consistent and did not contradict the hypothesis that *reflective practice produces a meaning orientation to study*, with a slightly improved score for a meaning orientation and deep approach to learning. These mean scores again can be compared with other results from other studies. The test for internal reliability of the questionnaire produced improved alpha values for the meaning orientation, when compared to Richardson (1990) and an acceptable value for the reproducing orientation (0.83 and 0.71 respectively compared to Richardson's 0.72 and 0.73). The alpha values suggest that the questionnaire is reliable in terms of its internal consistency (Black 1999). However, the use of one group of 35 students with similar biographies to the target group, rather than a larger scale pilot on the target group, does raise questions about validity. The conclusions on internal reliability may not apply across the age range and all qualification levels in further education. If resources permitted further trials
with the questionnaire with a more representative group of students would have been desirable. The results of this pilot do suggest reliability for FE based vocational courses with competence based assessment. The alpha values for the revised ASQ (FEASQ) are comparable to those of other studies that use the ASQ.

It may have been appropriate to conduct a factor analysis on the results of the revised ASQ. The FEASQ, as an adaptation of an existing research instrument used on a different group of students from the original questionnaire, could be said to represent a different construct, as a different construct factor analysis could help evaluate the value of individual questions. Factor analysis was used by Entwistle and Ramsden (1983) in the development of the ASQ as an instrument. Richardson (1990) argued that a complex “higher order factor analysis” (1990:161) is more appropriate when evaluating an existing psychometric instrument. Given the hazards identified with a factor analysis when using computer based statistical packages (Black 1993:138-139) factor analysis has not been used with confidence here. With a larger sample, factor analysis may be appropriate for use in future trials with the FEASQ.

*How the Approaches to Study Questionnaire was to be used.*

The ASQ was to be used in each case study by teachers as action researchers as a source of evidence to evaluate the success of their innovation. Teachers were encouraged to collect comparative data using the ASQ. The first approach suggested to teachers was to test their students at the beginning and at the end of the action research. This would enable a judgement as to whether or not the action research had contributed to a change in the students’ approach to study. An alternative approach was also suggested to the teachers; to use the ASQ with a parallel group of students who had not experienced the action research innovation. Each teacher administered the ASQ, I collated the results and completed the statistical analysis.
ASQ Conclusions

The pilot study has successfully replicated the statistical reliability of other accepted research designs and compares favourably with the results of published research. There is scope for a more powerful high order factor analysis to be used. It is therefore reasonable to conclude that the pilot study produced a FEASQ that may be justifiably used and tested in both future research and course evaluation. The ASQ was used to provide a source of data for analysis of action research, it provided a source of triangulation for the action research. It was selected because there are parallels in the theoretical and methodological approaches used in the student approaches to learning research and the literature on reflective learning. These similarities can be extended to practical discussion on the implications for teaching and learning. The importance of reflection as a strategy for fostering a deep approach to learning is explicit “Reflection on learning both on process and content, can help students take charge of their learning even in highly constraining circumstances, and move towards a deep approach” (Gibbs 1992:14). Independent learning and student autonomy are themes and objectives that occur in student approaches to learning (Gibbs 1987 1992) and reflective learning literature (Boud 1985). The role of learning by doing (Gibbs 1992) and practical experimentation (Jarvis 1988, 1996) is central to both traditions. Group work and co-operative working are stressed in both reflective learning and the student approaches to learning material (Boud 1985, Gibbs 1992). The reflective strategies emphasised by Jarvis of Socratic teaching styles, critical thinking and innovative thinking nurture high order intellectual skills that in essence require a deep approach to learning. It is therefore theoretically, methodologically and practically justified to utilise the ASQ as one research tool available to evaluate reflective practice and test the hypothesis that reflective practice produces a meaning orientation to study.

Chapter Five considered the overarching paradigm influences on this research. Chapter Six has broadly focused on what Denzin and Lincoln refer to as “Strategies of Qualitative Inquiry” (1994) and provided a rationale and
justification for using the Approaches to Study Questionnaire. Chapter Seven considers the research method used for the case studies in action research and facilitative framework used for data collection and presentation.
Chapter Seven: Research Methods

The methodology in terms of the overarching research paradigms, the aims of the research and research strategies have been discussed in earlier chapters. This chapter focuses on the nuts and bolts of the action research itself. The action research developed over a number of years in my role with teacher education. Models of reflective learning have been introduced by myself on in-service teacher education courses and used successfully by teachers in their practice. A framework for action research was produced in 1996 and participants in the action research sought from organisations associated with the teacher education programmes delivered in my college.

All participants in the action research were volunteers and ex-students of mine, all had successfully completed at least one teacher training qualification. Participants for the action research were identified in autumn of 1996 and most of the case studies were completed during that academic year. The FE ASQ was piloted and available in the autumn of 1996. The interview schedule was completed in the summer of 1997 and provided to all interviewees prior to the interview. The six interviews were completed between June 1997 and June 2000. All interviews were recorded on audio tape and transcribed by myself. My research interests in broad terms, as reflective learning, was clearly known to all the participants. The specifics of my research interest, including the role of Peter Jarvis, was generally not known to the teachers participating in the action research. There was no covert intent, I simply discussed the action research as a project and answered any specific questions that were asked. In practice the teachers questions focused on teaching and learning; there were few questions about the detail of my own research. The details relevant to each case will be considered in the next chapter.

The primary research aim for this element of the thesis was to establish whether;
• the application of reflective learning, by practitioners, improves student learning in post-compulsory education?

In order to examine this question in more detail the following issues are examined in the action research:

• To identify the methods teachers use to make learning more reflective
• To examine the outcomes of reflective learning as reported by teachers
• To identify examples of good practice in improving reflective learning

In order to clarify terms used in this research the teachers conducting the action research will be referred to as ‘teachers’. I will be referred to in the first person or as ‘facilitator’. The term student refers to the students of the teachers conducting the action research. The teachers who participated in the action research were provided with a facilitative framework for action research designed by myself. The facilitative framework was provided for two reasons, firstly to initiate the action research, to encourage the teachers to consider ways in which they could foster more reflection in teaching and learning. Secondly, it was hoped that if the teachers chose to use the suggested sources of data this would facilitate later cross case analysis by myself. The research process is now discussed to an extent each case study is unique and the precise details of the research process varies from case to case. This chapter will focus on the facilitative framework for the case studies and will consider the common overarching framework that connects them.

A facilitative framework was introduced as a spring-board for action research to be selected, rejected or adapted by the teachers as practitioners. The teachers used the Jarvis model of reflective learning and guidance notes based on my interpretation of the model. The teachers were also aware of the Kolb/Lewin model. The teachers as action researchers were then invited to integrate a model of reflective learning into their course design, teaching and learning; giving particular attention to the enhancement of reflective learning. As practising teachers they all regularly use teaching skills to facilitate learning from primary and secondary experience. The action
research in practice focused on the development of students' reflective, thinking and evaluative skills. All the case studies were completed between September 1996 and June 1999. The cases covered a range of teaching and training organisations; the details of each case are provided in the next chapter. The action research has two tiers; the first being the individual case studies and the second the overall analysis of the case studies and action research as a vehicle for reflective learning in itself.

To identify the methods teachers use to make learning more reflective.
This was the first objective of the action. The information given to teachers was not intended to be prescriptive: a strength of participatory action research is the recognition of the creativity and innovation of practitioners. The teachers discussed their innovations with myself as a facilitator. With the exception of case study two, which I designed and a colleague applied, my role was one of support not direction. An aim of this research was to examine how teachers use reflective learning, not to impose criteria and methods of action research.

Examining the outcomes of reflective learning as reported by teachers.
Having planned an innovation the teachers were encouraged to collect data that would enable them to:

- compare reflective learning students' assessment results with similar non-reflective learning groups;
- compare reflective learning students' perception of course experience with similar non-reflective learning groups;
- examine teacher perceptions of course experience;
- establish whether reflective learning produced a meaning orientation to study.

Action researchers were encouraged to use comparative data to evaluate the outcomes of their innovations. The selection or even use of comparative groups was left to the discretion of the teachers as action researchers; such data may prove difficult to come by. Although I encouraged collecting
comparative data, this may have been an unrealistic proposal. Agreeing to
work together and conduct the innovation itself placed additional demands on
these busy practitioners. The primary record of the case study data was
derived from a focused interview that explored the teachers' perceptions,
judgements and informed evaluation of the process.

Student perception of course is routinely monitored in many areas of post-
compulsory education. It is an essential part of course evaluation and
college performance review and evaluation procedures. The usual data
collection method for student perception of course is a Likert scale
questionnaire. Teachers as action researchers were encouraged to use their
organisation's existing performance indicators for student perception of
course. For a more thorough analysis of student perception of course a more
qualitative student controlled method of data collection was provided.
Nominal group technique as recommend by Ashcroft and Foremen-Peck
(1994) was adapted as an alternative to the conventional Likert scale
questionnaire.

Nominal group technique is similar to the teaching method of 'snowballing'.
With nominal group technique students work on the first stage of an
evaluation task individually, the next stage in larger groups and end with a
whole class plenary. This technique can provide a rich source of student
centred qualitative evaluation data. It provides a structure for students to
tackle the difficult task of commenting on their course experience. With
nominal group technique they can set the agenda and decide which issues
need to be addressed. As a group they can prioritise the issues raised and
agree recommendations for future action. In another sense it is possible with
nominal group technique for students rather than teachers to decide which
evaluation questions need to be asked, to collate the results and produce an
action plan. Nominal group technique can therefore be time efficient for the
teacher.

Ashcroft and Foreman-Peck (1994) suggest that nominal group technique
helps avoid the pitfalls of evaluation through interviews or whole group
discussion, where the results may only reflect the views of the more vocal members of the group. Nominal group technique can help create a feeling of commitment and ownership of the evaluation as it allows all the students to participate in setting the agenda. Alternative evaluation methods that rely on pre-set questionnaires can be regarded as bureaucratic by students and may only identify the concerns of the organisation, not the student group.

There are various approaches to nominal group technique; the one used as part of the facilitative framework and provided for the teachers as action researchers was developed from Ashcroft (1994:174-175) and outlined below; it is open to adaptation.

Stage one.

The tutor asks general questions to get the students started for example: “What helped me learn from this course” and “What hindered my learning on this course”. These questions can be more specific and ask students to list helpful and unhelpful factors in different aspects of the course such as theory, practice reflection and evaluation. Students spend a few minutes individually “brainstorming” the answers to the questions and compile a list of ‘helpful’ and ‘unhelpful’ factors.

Stage two.

All items from each student’s list are read out and recorded on board, flipchart or projector. Duplicate items are crossed out. Once listed each item is clarified to make sure everyone understands what they mean. No critical responses are allowed at this stage.

Stage three.

In small groups the students record their list of ‘helpful’ and ‘unhelpful’ factors in priority order from one to ten. From this list students are encouraged to write action points related to two ‘helpful’ and two ‘unhelpful’ factors that will help improve the quality of the course.
Students should be aware that in order to maximise effect, action points will need to convince others involved in the design, delivery and evaluation of the course. People tend to respond more favourably to feedback that is positive and constructive.

Stage four.

Discussion and plenary. Action points from each group are recorded and discussed. A voting system can be used to decide the priorities for action with each student given three votes.

Stage five.

Tutor records the outcome of the plenary discussion and voting. Tutor collects a completed form from each group with their agreed priorities of 'helpful' and 'unhelpful' factors and each groups' action points. Tutor produces a summary report.

This technique directly involves the students in the evaluation process; it is democratic and allows the student group to set the agenda, discuss evidence and make recommendations. It is participatory and directly concerned with improving practice for these reasons it is an appropriate data collection method for action research. It represents a synthesis of a reflective learning technique in the form of snowballing (Jarvis 1995) and student centred evaluation methods to provide a potentially rich source of qualitative data for student perceptions of course for the action research. Nominal group technique, though time-efficient for practitioners, is perhaps costly in terms of class contact time and therefore may not be readily accepted as practical by all action research participants.

A central aspect of this research is to consider how the theory has been enacted and evaluated by practitioners. The reflections and evaluations of teachers as action researchers provides the central thread by which to evaluate the primary research aim; to improve student learning by using models of reflective learning in post compulsory education. The facilitative
framework provided a guide to information that teachers might use to evaluate their innovations; however, control over data collection and analysis methods remains the prerogative of the teacher as action researchers. They were encouraged to record their observations and reflections of the action research through personal development diaries and lesson evaluations. Some used the opportunity to gather data as evidence towards in-service training awards. The central means by which the teachers as action researchers provided an account of their reflections and experiences was through a focused in-depth interview with the facilitator. This retrospective interview followed a series of informal facilitator and action researcher discussions that initiated and reviewed the progress of the action research.

The agenda for the interview was given to the interviewee in advance in order to give them the opportunity to reflect on the questions and their action research (refer to appendix). The purpose and process of the interview was made clear to the interviewee and verbal permission for the use of the data in my own research was gained before the interview commenced. Six interviews were recorded between years 1997 and 2000 on audiocassette tape, and later transcribed by myself. Recording equipment and advice was gained from teachers of radio journalism on how to record the interview as effectively and unobtrusively as possible. A private well furnished room was used for all interviews to minimise distraction and provide for good sound quality. A flat table mat style multi-directional microphone was used in all interviews; it was unobtrusive and enabled clear identification and recording of all participants anywhere in the room. The recording equipment was usually placed on the floor, out of eye line of the interviewee, but with recording levels visible to the interviewer. Early questions were straightforward, factual questions that put the interviewee at ease and provided an opportunity to check recording levels, such checks risk a little disruption, but are essential for a quality recording and ensuring the process is worthwhile.

A structured questionnaire was used and given in advance to the interviewee. Questions were predictable to the interviewee since they focus
on the detail and outcome of their action research. The questions were a mix of open and closed questions, some of which were quantifiable. Other questions were more qualitative and evaluative in nature, seeking out the interviewee’s opinions, judgements and beliefs. The interview method was less formal and more conversational than a structured interview; the term “focused interview” (Selitiz et al. 1976) is therefore a more appropriate definition than that of structured interview. The interview schedule provided a framework of issues to discuss, and aimed to create a dialogue, a conversation where the interviewee relaxed and discussed the issues. The exact order of the questions would vary if the answers naturally occurred earlier. If non-scheduled issues arose they were allowed to develop. The interview process is consistent with the description of focused interviews developed by Merton, Fiske and Kendall:

Interviewers have the freedom to explore reasons and motives, to probe further in directions that were unanticipated. Although the respondent is free to express completely his or her own line of thought, the direction of the interview is clearly in the hands of the interviewer. (Selitiz 1976:318).

Cohen and Manion provide a summary of the focused interview:

The persons interviewed are known to have been involved in a particular situation ... elements which the researcher deems significant have previously been analysed by him ... Using his analysis as a basis, the investigator constructs an interview guide. This identifies the major areas of enquiry and the hypotheses which determine the relevant data to be obtained in the interview. The actual interview is focused on the subjective experiences of the persons who have been exposed to the situation. Their responses enable the researcher (a) to test the validity of his hypotheses; and (b) to ascertain unanticipated responses to the situation, thus giving rise to further hypotheses. (Cohen and Manion 1989:326).

The focused interview provides scope for the formation of new hypotheses from unanticipated information. This characteristic corresponds with the process of continuing reflective cycles of learning experienced in action.
research. The focused interview with teachers addressed all the action research aims in this research and thereby provided a summary report of data collected by action researchers.

The teachers as action researchers were also provided with a copy of the ASQ questionnaire and encouraged to use it with their students both before and after the action research or with a control group. The intention was to use the ASQ as a means of providing standardised and comparative data across the case studies. In practice most teachers simply used the questionnaire at the end of the action research as a tool of evaluation. The teachers as action researchers then compared the results with that of other studies. The limitations of this use of the ASQ are discussed below.

**Identifying examples of good practice in improving reflective learning**

The second tier of the research analyses all of the case studies and seeks to provide examples of good practice. It looks for emergent themes and questions for further research to identify the strengths and weaknesses of the action research and make recommendations for future research. If the evidence supports the process, this element of the thesis will provide a platform for tentative theory building and for evaluating the potential for a symbiotic relationship between theory, practice and research, a relationship that does not give primacy to any one part of the triad of theory practice and research, but attempts to build free flowing democratic channels of influence between all three. The second tier of the research will provide cross case analysis and form the basis of chapter nine.

The method of analysis utilised in this second tier of the research follows the guidelines for cross case analysis presented by Huberman and Miles (1998). Each case study, whilst unique, operated within a broad framework of trying to improve student reflective learning. They share a number of elements and components that facilitate cross case analysis. The cases are located in context and the variety of data sources used in practice (as opposed to those recommended in the facilitative framework) are made explicit. Having studied each case in turn, themes that emerge will be identified, the analysis
of cross case themes fits Huberman and Miles “variable orientated strategy” (1998:196). The sampling of themes and issues for cross case analysis reflect the conceptual framework of the research outlined in part one. The theoretical position of the thesis has influenced the construction of each innovation and the research questions asked, the analysis is not simply grounded in data alone, but searching for issues around the theme of reflection and reflexivity. Care has been taken to make the theoretical position and any reflexive bias explicit and transparent throughout.

The facilitative framework was designed to enable teachers to reach their conclusions through consideration of a range of data sources. Teachers were encouraged to collect data on assessment results, their own observations and student evaluations of their course experience. Using a variety of sources, “slices of data” (Huberman and Miles 1998:199), the teachers were encouraged to triangulate their analysis and make more informed evaluations. The extent to which each case did this was variable and determined by the teaching context. While each source of data may have been imperfect, it is possible to cross check findings by using a variety of evidence. Sources of data were simply recommended rather than standardised.

Huberman and Miles (1998) report a tension in research that was also discussed here. Pre-designed instrumentation, such as the facilitative framework and FEASQ is provided to try and achieve cross-case analysis that enhances the internal validity and potential to generalise to other situations and settings, but another key research objective was to conduct research with a view to improving student learning in the context of real life experience of everyday teaching and learning through practitioner action research. Huberman and Miles (1998:205) suggest that pre-designed instrumentation can be a barrier to research that connects “with peoples’ lived experience and minimise researcher impact.” (1998:205). The facilitative framework represented a compromise between these two aims. It was to be used flexibly by the action researcher, adapted as appropriate and feasible in their context. Each adaptation provided a model appropriate to
the context and real experience of the students and teachers. At the same time each adaptation made comparison across cases more difficult.

Presentation of Case Studies:

The approach to the case studies presented in the next chapter reflects the overarching issues and themes outlined in part one of the thesis, those of:

- Context.
- Theory.
- Practice.
- Reflections.

These headings are used in turn to provide a framework for reporting each case. The approach can be discussed in terms of Stake’s (1998) summary of the conceptual responsibilities of case study researchers.

**Context:**

Each case will be situated in context. This includes the responsibility to provide the “bounding of the case, conceptualise the object of study” (Stake 1998:103). It involves providing background information on the setting, the organisational context, people and the nature of the learning, the context section presents the particularities of the case, the information unique to that case. In paradigm terms it also places a stress on the situatedness of the case, the context; as such it corresponds with what Guba and Lincoln (Denzin and Lincoln 1994) would refer to as critical theory. The discussion of context is therefore purely descriptive and concerned with the specificity of the case. It is intended to make the case as transparent as possible without breaching confidentiality.

**Theory: the innovation**

A rationale and a detailed description of each case study in action research is required. Each case study is instrumental, as well as intrinsic, in the sense that it attempts to promote a more reflexive form of education through
reflective learning. The teachers concerned are consciously and reflexively trying to apply abstract concepts of learning to their day to day practice. From the outset there is a clear agenda, to improve student reflective learning. This section of the case study report might be said to meet a responsibility of the case researcher, that of “selecting phenomena, theme, or issues – that is, the research questions – to emphasise.” (Stake 1998:103). The questions used in each focused interview with the action researcher make the themes and issues explicit.

Practise: outcomes of the innovation

This section is primarily concerned with the practice outcomes as reported during a focused interview between the teacher as action researcher and author as facilitator. It tells the story as experienced by the teacher. Where the teacher presented supporting documentary evidence, such as a written research report or statistics from assessment or questionnaires, this is also referred to. The practice outcomes section fulfils responsibilities of the case researcher as presented by Stake: seeking patterns of data to develop the issues, triangulating key observations and interpretations (Stake 1998:103).

The facilitative framework presented to action researchers provided for triangulation. It encouraged each action researcher to collect a range of data to evaluate the outcomes of their research. The extent to which this was achieved will be discussed in the conclusions. Stake refers to triangulation as “... a process of using multiple perceptions to clarify meaning, verifying the repeatability of an observation or interpretation.” (Stake 1998:97). This triangulation was pursued in the focused interview where interviewees were encouraged to discuss the range of data sources used and evaluate their practice. Responses were at times summarised by the interviewer and played back to the interviewee as a means of confirming understanding or at times offering an alternative explanation as a means of prompting further dialogue.
Reflections and conclusions

The teachers’ concluding observations and interpretations along with my reflections were presented. The reflections and conclusions element are central to both the research and learning process, and fulfil the last two criteria for case researchers suggested by Stake: those of selecting alternative interpretations to pursue and developing assertions or generalisations about the case (Stake 1998:103).

Where generalisations are drawn these are tentative, there is no claim that the cases individually or collectively are representative of populations, simply an acknowledgement that it is possible to learn from the experience of others. A central task here is to represent these cases as examples of teachers reflexively trying to improve their practice as practitioner researchers. Stake’s view is accepted: “case studies are of value in refining theory and suggesting complexities for further investigation, as well as helping to establish the limits of generalizability.” (Stake 1998:104).

Conclusions

The facilitative framework negotiated with the teachers is outlined above and provided in the appendix. In summary, three stages to the action research were suggested to the teachers;

1. Action researchers taught a topic or module in the conventional way and used a number of research tools such as those outlined above to analyse and evaluate student learning. This initial stage of the research provided a bench mark from which to judge the implementation of reflective learning and facilitate the measurement of value-added learning.

2. Participants redesigned their teaching in terms of reflective learning and the Jarvis learning cycle. Their teaching encouraged more evaluation, thinking and reflection by the students. On completion of the topic or module the participants used the above research tools to analyse and evaluate student learning.
3. Participants compared the results of stage one and two above and evaluate the model as a means of improving student learning. The evaluation was the focus of an interview with the facilitator and in some cases also took the form of a written report.

The research design provided by the facilitative framework is seen as desirable from the facilitator perspective. However, it could and should not be imposed on the teachers. At a pragmatic level, teachers were volunteers embarking on a time consuming process of action research; the demands of the proposed research design may be impractical or inappropriate to the particular context. The collection of comparative data in order to provide a bench mark or control group might have proved to be the most difficult area, but it should not be imposed for reasons outlined by Carr and Kemmis (1986); action research aims to keep the process as practitioner-centred as possible. A purpose of these action research case studies was to examine ways in which practitioners apply and adapt theory to their particular context; to explore participation, primary, secondary learning and reflexivity as features of action research. The reflexive nature of contemporary modernity is acknowledged to permeate all social research; the action research presented in the following chapter consciously seeks to harness that reflexivity and to empower individuals as the ‘other’ and open up research to a wider constituency of decision-making.

The research design presented here is only concerned with one element of the thesis: the case studies in action research. The action research aims to assess the outcomes of reflective learning as a more reflexive form of education in late-modernity. It aimed to explore ways of improving student reflective learning. The action research is concerned with reflective learning as theory enacted and theory experienced. The other critical element of the thesis is the examination of reflective learning in a social and philosophical context as a mode of learning that is pertinent to our age and modernity itself; this element was explored in part one.
In the following chapter the number of case studies reported is six. One other remains incomplete, it is therefore not reported. Action research participants include seven teachers as action researchers and myself who had a facilitative role. Over two hundred students experienced the action research innovations. Given that the action researchers are volunteers known to the facilitator there is no rigorous sampling frame, the reliance on volunteers in action research does not permit such a luxury. The action research therefore presents a series of case studies of teachers endeavouring to nurture more reflective learning with their students.
Chapter Eight: Case Studies in Action Research

The case studies in action research, presented in this chapter, consider reflective learning as applied in practice, using teaching and learning activities by practitioners that aim to promote more reflective learning for their students. The experience of action research itself is also a reflexive learning experience, for the practitioner. The practitioners who participated in the action research were all experienced teachers. They were free to use, reject or adapt the framework to their teaching context. I initiated the original proposal for research, and worked with practitioners over the whole period. All agreed to be interviewed at the end of the process, a number also provided a progress report. Each case study attempted to improve student learning through teaching and learning activities promoting reflective learning. The primary model of reflective learning used was Jarvis’s (1987) model and the methodology followed Gibbs (1992). The method of reporting the cases attempts to reflect the underpinning model of learning; each case is considered in terms of context, theory, practice experience and reflections and conclusions. Where there are similarities with elements presented between cases, the theoretical approach for example, only the earlier case study example is reported at length.

Case-Study One

Case study one is of automotive engineering apprentices in their final year of a part-time day release in a Further Education College; the apprentices were in their third year of a National Vocational Qualification at level three. The two teachers had a similar level of experience and worked closely together as a team. Two parallel groups were compared, both third year classes; the first group was taught conventionally by one teacher (‘C’ in the interviews) and an experimental group where the action researcher (‘A’ in the interviews) applied a more experiential and reflective approach. Both groups had completed key skills and were modern apprentices. The conventionally taught group had twelve students, the action research group twenty students.
With different group sizes and different teachers the design was only quasi-experimental. The data discussed below were gained through a one hour long recorded interview with the author.

The action research was developed with reference to the Jarvis (1987a) model of reflective learning and through dialogue with the author who had previously tutored them on an in-service Certificate in Education. The action research was also completed a year earlier with younger students (16 year olds on a NVQ level one). It was the success of this initial piece of action research completed as part of a Certificate in Education that led to the development of the case study as reported here. The following pages will provide a description of the action research, the outcomes of the action research and conclusions.

The conventional timetable of apprentices on day release includes theory lessons and practical work experience. Apprentices, who left school at sixteen and entered the world of work, quickly find themselves back in a familiar classroom environment at college. There exists, in this apprentice training, a divide between theory espoused in the classroom and practice experienced in the workshops. The classroom theory is supplemented with work experience gained both in workshops and in their work place. Both teachers involved in this action research confirmed that the traditional day release model in Further Education would be a two to three hour theory lesson in the classroom followed by a two to three hour practical. When asked about this theory practice divide the action researcher reported that: “its theory here followed by work experience. That’s one of the problems – theory and practice are not connected.”

With the conventional approach the teachers reported more disruptive behaviour and difficulty in getting through the material in theory lessons. The conventional approach to the theory lessons may have been promoting non reflective learning, that could be termed a surface approach, where “the students reduce what is to be learnt to the status of unconnected facts to be memorised.” (Gibbs 1992:2). When asked how the reflective learning action
research contrasted with how the students were taught conventionally the response was contrasted with problem solving in the experiment with reflective learning. As teacher 'C' reported:

C With the same group, I covered modules one by dictation, the other group the experimental group had a lot of problem solving. I didn't use the workshops but gave them tasks to work in groups, then go away to their work placements for 4-5 days and come back with answers. Some practical tasks, some assignments.

The reflective learning action research aimed to break down the theory practice divide as well as incorporate a higher degree of reflection and analysis of experience. It aimed to integrate theory, practice with reflection through short cycles of reflective learning activity.

The original action research arose from discussion in tutorials on a Certificate in Education about classroom behaviour in theory lessons. Attention spans in theory classes were discussed and short sharp units of learning suggested; regular changes to teaching and activity was planned into the lesson. The recommendations can be summarised as:

- Include more activities, or learning events.
- Use short bursts of teaching and learning activity.
- Encourage active learning.
- Include student reflection in the learning process.

Considered alongside the Jarvis (1987) model of reflective learning the changes in learning activity were derived from the model itself. As a teacher and facilitator in the project I suggested the teachers try using a number of short, sharp cycles of reflective learning within a lesson; breaking down the theory practice divide and structuring in an element of reflection and evaluation on the part of the students. A number of teaching and learning models were suggested which reflected these changes. Essentially the action research could be reduced to three core types of learning activity:

- Theory and Demonstration (secondary experience)
• Practical Application (primary experience)
• Reflection and Evaluation (transformation of experience)

The three elements constitute the key ingredients of the short, sharp cycles of learning. Over their day the students would experience a number of short cycles of the different learning activities, rather than simple blocks of theory and practice. One model for the day is represented in figure 8.2.

Figure 8.1

<table>
<thead>
<tr>
<th>Introduction</th>
<th>Theory</th>
<th>Demonstration</th>
<th>Practical</th>
<th>Application</th>
<th>Reflection and Evaluation</th>
<th>Conclusion</th>
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<td>Conclusion</td>
</tr>
</tbody>
</table>

If the above represents the theory espoused or the facilitative framework this was adapted and interpreted by the practitioners in their context. The action researchers’ description of the process as they applied it in their context is as follows:

M  …Could you explain the differences in the teaching between the two groups?

A  From my side of things (reflective group), the experimental group, we went from a very classroom based theory lesson, … to one where we read scripts and tried to link that with what went on in workshops. So we had a little bit of theory then we would go into the workshop to practice what they had been taught and then back in the classroom to pick up conclusions, analyse. That was the main difference between the two groups.

M  So you had a short burst of theory in the classroom, immediately followed by a short practical, apply the theory then straight back to the classroom to reflect on practical results?

A  Yeah.

M  And how long were these sections?

A  That group it was about an hour each because of the technical problems of going from one building to another. We weren’t based in the
workshop all of the time. Though sometimes finished up with the conclusions actually in the workshops, and do a bit of theory in there.

M Were there other changes?

A Yeah, because instead of giving them a theory which they had to understand as knowledge, it was a question of 'what you would actually do if this happened' - 'what would you do with - how would you deal with that' and instead of simply giving the answers 'go and try it', learn from, by, their own mistakes and use the equipment to diagnose rather than rely on me.

M You encouraged autonomy and diagnostic skills?

A That was the approach and philosophy and they'd learn by doing.

M So we have more doing, autonomy, thinking.

A Yeah. I facilitated where necessary ....

M So you tried to integrate theory and practice in your reflective learning?

A (Nods) Yeah. Integrate it.

M Did you add reflection to it?

A Yeah.

A So they go away, like, if they had a diagnosis problem on a car, they would have to find the vehicle, take the details on the job card of what they did, then discuss the outcome at college.

Following a short input of theory students immediately applied theory to practice and had learning time structured to analyse, reflect upon and evaluate this experience. A model of reflective learning was applied. In terms of Jarvis' (1987a) model the method represented reflective skills learning whereby:

- A person has a situated experience. (teacher centred theory) to;
- practical experimentation (workshop experimentation) to;
- reasoning and reflecting (reflection on results of practical) to;
- evaluation (planning and reporting on further action) to;
- memorisation to;
the person changed and more experienced (Jarvis 1987a:34);

The individual elements of learning activity in practice were longer than suggested, though shorter than in conventional lessons. Timing was governed by the practicalities of timetables, rooming arrangements and the need to move between buildings. There was a strong Dewey element, of problem solving and practical experimentation, testing of ideas in practice rather than transmission of a received 'knowledge'. The approach was Socratic with questions and 'what ifs' asked of the students; rather than answers simply being supplied by the teacher. In addition to college based theory and practice, students were given opportunity to discuss and utilise and reflect upon their work place experience. These may appear to represent small changes, but in terms of the process and outcomes the action research produced improvements in student learning and teachers' practice.

The teachers used a range of methods to monitor and compare the impact of the action research including student summative assessment results:

C  Both groups had three assignments marked as a percentage. Both groups had an end of year exam, so we have some results there. Your questionnaire. (ASQ)

The teacher of the experimental reflective learning group also kept a diary of observations of classroom behaviour. The teachers were not successful in their attempts to get feedback from other colleagues:

M  Did you get any information from other teachers or line managers, anyone else?

C  No, unfortunately.

A  I tried to get others involved, but to be honest they were all a bit busy and whatever.

Before the research began, this teacher experienced difficulties with classroom management and was keen to find ways in which students could gain more from lessons. The conventional lessons were found to be quite stressful; during the interview the teacher who innovated refers to 'less
hassle', changes in student attitude and students now reluctant to leave classes. The teacher ('C') who continued with his conventional approach can be seen to have had quite low expectations of the students and at times was quite negative about the class. It is against this background that the enthusiasm of teacher 'A' for the action research, can be understood. As the groups were not randomly selected and unmatched, it is unlikely that it was the action research alone that produced the different outcomes, it is equally probable that the outcomes were influenced by the action research. The testimony of the practitioners themselves on the outcomes of the action research is provided below.

M  Good, perhaps we could go through some of those sources of data and talk about your results so far. Shall we start with your own observations.

A  I believe it worked and was very positive. Just their attitude and the fact they wanted to go and work. Work on something they wanted to do, something with a result at the end of it. It was interesting to see them working in groups, you got natural leaders, leading others. It worked very well.

A  Their attention level went up, they were keen to get on and do things.

M  It improved their level of motivation?

A  Absolutely. Yeah.

M  What about from the teacher's point of view and classroom management?

A  Brilliant. A few technical areas, you need support staff, workshops, equipment, tools. Getting all that together can be tricky, and the lessons ran out too quick. We just ran out of time (laughs).

M  Is running out of time something new?

A  Well if I was honest with you, at quarter past three, they would be saying things like "isn't it time for a cup of tea?" and (now) I've got them in the workshop at four and saying to 'em come on I've got to go, someone else is due in here. Would you agree with that?

C  Yes.

A  Because they're actually doing something. They're going "no, this is good" and wanting to stay in. That was them, that was from them!
The linking of theory, practice and reflection, combined with problem solving exercises, clearly motivated the students in a way that pure theory or practice previously had not. Both teachers reported that students who had previously been angling to finish lessons early at 3.15pm now found the time passing too quickly and at 4pm students were asking to stay on to continue working on a task. The language used by teacher ‘A’ suggests that the action research was a transformative experience for both him and the students. The thrill and rewards of effective teaching are evident in the above account.

For teacher ‘A’ the teaching and learning action research was a success. For teacher ‘C’, who continued with his conventional approach there are concerns that it would not have worked with his ‘control’ group.

C That’s right. I think so. But personally I found it worked very well with the mature students. I think you would have to be careful with other groups. Our control group haven’t got the self-discipline. Give them a task and they would slope off.

Initially the conventional group teachers’ perception of the class remained similar to the original reports of difficulties teaching long theory classes. Later in the interview teacher ‘A’ cautiously persuades his more sceptical colleague that the action research may have worked with the conventionally taught ‘control’ group.

C Coming back to something we said earlier was um it works well with a mature group, but a less mature group, they haven’t the self discipline.

A But could, but then, could I argue that... when we did some work on it last year we used first years, they were 16 (years old), and their, as you know, their results are encouraging as well. (looking to M and C).

M I am not sure I can remember.

A We proved the theory, it was a long time ago, and that was with a group of 16 year olds doing a level one.

M And did you do it the same way last year?

A Yeah.

C Yep. Two different subject areas but the same method.

M They were youngsters?
A Yeah, 16, straight from school. I am not trying to put you down (to C) but I’m saying........

C Yeah, that’s fair, I know what you’re saying. Yes. (nods in agreement).

At the time of the action research both participants were qualified and experienced teachers, though relatively new to the teaching profession. Both had completed their teacher training where the ‘conventional’ approach certainly would not have been endorsed as good practice. It is therefore interesting to note how an alternative perception of what constitutes a ‘theory’ lesson persists. I was genuinely surprised to hear the word ‘dictation’ used by these teachers in the 1990s to describe the conventional approach to teaching. Does this reflect the acquisition of a working culture of a department? Or are teachers representing conventional teaching as they experienced it as pupils and apprentices themselves? When asked what recommendations they would give to their colleagues as a result of the action research the response was quite straightforward:

M If you gave a presentation to your colleagues on how to do this, what would you recommend they do in their classrooms?

A Do what we have done.

M The key change is?

A Keep moving, get them involved, don’t stand up and waffle on at them for three hours. Do a bit of this and a bit of that (pointing to aspects of the Jarvis reflective learning model).

In the late 1990s there is clearly a perception here that teaching is not always active, reflective and experiential, but often simply teacher talk. For teacher ‘A’ enthusiasm for reflective teaching and learning shines through, although it would appear that; a crude didacticism is still the norm.

The students in the case study completed the Further Education Approaches to Study Questionnaire (FEASQ). The practitioners compared the two groups to see if the reflective learning groups were more inclined to adopt a deep approach rather than a surface approach to learning. The sample sizes are small and results need to therefore be interpreted with caution. Table 8.1
provides the FEASQ scores for the action research groups of apprentices and the conventionally taught (control) group; Richardson’s results with undergraduates are included as a benchmark.

### Table 8.1 FEASQ Mean Scores for Case study One

<table>
<thead>
<tr>
<th></th>
<th>Meaning Orientation</th>
<th>Reproducing Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Richardson (1990:159)</td>
<td>43.39</td>
<td>34.23</td>
</tr>
<tr>
<td>Action Research Apprentices</td>
<td>46.5</td>
<td>36.8</td>
</tr>
<tr>
<td>Control Apprentices</td>
<td>46</td>
<td>42</td>
</tr>
</tbody>
</table>

Action research group N = 15 Control group N = 10

Both the conventionally taught group and the action research group produced a similar score for the meaning orientation to study. The control group seemed more likely to adopt a reproducing orientation than the action research group. The samples are small yet both apprentice groups would appear to have adopted a higher meaning orientation to study score than that found by Richardson with undergraduates.

During the interview the practitioners who administered the questionnaire were sceptical about the value of the responses completed by the control group. One of them said in interview that he did not believe the control group understood the FEASQ questions related to a meaning orientation. Given the doubts expressed in the interview the FEASQ results for case study one were examined in more detail. I checked the interviewees concerns by looking at the alpha scores for reliability. Testing for Cronbach coefficient alpha scores was part of the instrument design process and it is not usually necessary to test for reliability on subsequent small samples. However the alpha scores for the responses of the two apprentice groups do throw some
light on some curious results and reinforce the opinions of the teachers that the control did not produce consistent scores for the questions related to a meaning orientation to study.

The reliability score for the control group's answers to questions related to a meaning orientation to study was minus 0.09. With such a low alpha score there is no consistency in the control group response to questions related to a meaning orientation to study. Taken together with the opinion of the practitioners, who administered the questionnaire, the control group scores for the FEASQ do not appear to be a reliable measure of their meaning orientation to study.

<p>| Table 8.2 Cronbach coefficient alpha values for Case study One using FEASQVersion II |
|---------------------------------------------|-----------------------------|</p>
<table>
<thead>
<tr>
<th>Action Research Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpha</td>
<td>Alpha</td>
</tr>
<tr>
<td>Meaning Orientation</td>
<td>0.9</td>
</tr>
<tr>
<td>Reproducing Orientation</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Action research group N = 15 Control group N = 10

The reproducing orientation to study with an alpha 0.6 does suggest the FEASQ had some reliability with these groups. In order to assess whether the different scores for a reproducing orientation between the two groups were significant the Mann-Whitney U test was used. It was selected because the data consisted of two independent samples with ordinal level scores. A greater score for the reproducing orientation was predicted for the control group the significance was therefore judged for a one tailed test, following the convention of significance being less than or equal to 0.05. The Mann-Whitney U test was calculated using the procedures recommended in Clegg (1990) and SPSS. The Clegg (1990) procedure was cross checked using the procedure in SPSS. The results were calculated on a spreadsheet because Black (1999) reports discrepancies arise with the Mann-Whitney U test when
using statistical software packages, such as SPSS. Different procedures use different techniques for correcting rank order ties and for sample size. The test produced figure for U of 38.5 using Clegg (1990) which provides a probability ≤ 0.05. It is therefore possible to conclude that the mean scores reported in Table 8.3 for a reproducing orientation to study did not occur by chance. The results for the Mann-Whitney U test are given below in Table 8.3.

Table 8.3

Mann-Whitney U Test for Reproducing Orientation Scores in Case Study One

<table>
<thead>
<tr>
<th>Operation Schedule</th>
<th>Clegg (1990)</th>
<th>SPSS Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
<td>38.5 (p≤ 0.05)</td>
<td>39.5 (p = 0.048)</td>
</tr>
</tbody>
</table>

NB SPSS analysis did not correct for ties

The interview revealed a dramatic difference in the assessment results for the two groups with the control group all failing the exam and ninety percent exam success rate for the action research group. Coursework assignment marks were also reported as higher for the action research group. With so many extraneous variables I doubt the difference in exam scores could be attributed to the teaching methods alone.

M What about assessment results, exams and assignments?

A Tell him about the exams.

C On the exams on the experimental group (reflective group), out of twenty odd students, only two people failed. The rest of the marks were very good but with the control group everybody failed.

M Oh dear.
A couple of other small problems might have helped cause it. But, with the assignment work, again the experimental group (reflective) with the assignment marks were certainly higher than the control group.

M Did you have any assignment marks for the experimental group prior to the experiment?

A Yeah. Because of the time scales I’ve got a set of figures for the good group, if you like, prior to their changing teaching styles. So I can compare the experimental group before and after. Yet to do that fully, but it looks encouraging.

Compared to the conventionally taught group the action research group would appear to have had better exam results, higher course work marks and were less inclined to report a surface orientation to study. The action research group also reported a meaning orientation to study (mean 46.5) rather than a reproducing orientation (mean 36.8) to study. The significance of these meaning orientation scores for the action research group was tested using the Wilcoxon Signed Ranks Test for a one-tailed hypothesis. The results were found to be significant ($p \leq 0.05$). From the interview it is clear, that for the practitioners, reflective learning produced improved student outcomes and a more satisfactory learning process. However, without clear data prior to the action research one cannot infer any cause and effect. When asked to provide a summary of their action research into reflective learning the practitioners responded:

C As a short summary, students enjoy it, we appear to be getting better marks in assignments and exam marks.

A It works.

C It works, yeah.

A From what we have seen, and its more enjoyable, for myself its less hassle, because they are enjoying it. But it does take a bit more organising - in fairness. You can’t just go into a classroom and say we will do this today, you have got to plan it, have it all laid out in advance.

The comment about ‘less hassle’ takes the research full circle. It was the difficulty of teaching theory classes to day release apprentices that prompted the original action research. The action research produced better classroom behaviour: “Much better they’re interested all the time”. The picture was
quite different with the conventional (control) group: “They were more or less spoon fed and I still believe with that group it would have to be like that just to keep them sat down. The second you let them loose they would wander.”

The assessment results for the control group (all failing the exam, lower coursework marks) were so different from the action research group it seems unlikely that the action research alone would account for the different outcomes. It is also too easy to make judgements about the attitudes and expectations, of the two teachers, that seep through in the interview quotations. It is quite possible that the control group in this case study were simply a more difficult class to teach. However, both groups were in the same year with similar backgrounds doing the same course. The only obvious difference was the experience of teaching and learning. Although ‘C’ had reservations about using anything but his conventional methods with his particular group, both practitioners believe the evidence suggests that the reflective learning action research improved the student learning. The process has resulted in ‘C’ reflecting upon the experience and asking questions about how he will use the ideas in a classroom context in the next academic year.

During the interview the teachers present the reality of lesson planning; the pattern of teaching and learning provision is structured around the timetable and room allocation. Moving groups between buildings is an obvious barrier to action research when trying to integrate theory and practice. The enthusiasm for the reflective learning, on part of the action researcher, is clear throughout the interview. It is concerns about timetables and rooming that recur. When asked about the disadvantages of the reflective learning ‘A’ replied:

A  I would say, disadvantages are the actual organisation of what you’re trying to do. Keeping control of things like equipment, booking of rooms.

M  There’s quite a lot of admin.

A  Yeah. Timetabling and things, and little things like students reflect and it is all very well me getting them to do written work in the workshop, but they get their books greasy and ...... it’s only a little thing but that is the
only disadvantage I can think of. The advantages obviously what the student learnt, their motivation. The results they got are encouraging.

Towards the end of the interview I asked how they would try and improve the practice next year. Here ‘C’ is reflexively looking again at his practice and thinking about more reflective learning strategies:

M  Any other refinement for next year?

C  Thinking about next year. This year we have been able to use classrooms and workshops. For me to do it next year I don’t think I will be able to be in the workshops at all next year, the way the timetable is going to go. So I’m trying to think how I can use it in a classroom solely. I have got something you must think about as most of your teaching is classroom based? (to M).

M  Yeah. Mind you the classroom is our workshop I suppose (laughter all round).

When discussing the improvements for the following year it emerged that student involvement in determining the learning process was an important ingredient in the success of the method, when asked the students chose a more experiential learning approach. The teacher’s motives were pragmatic, rather than concerned with empowerment, but an element of student negotiation appeared to work.

M  How would you improve it then, the method?

A  I would spend more time explaining to the students what was going on, it was so different to what they were used to. So we need to look at that. And just the physical constraints of organising workshops.

M  Did they mind you doing things differently (the students)?

A  Well I used a bit of reverse psychology. I said ‘what do you think is the best way to learn how that works?’ and they said ‘let’s have a look at it’. So I said we can’t do that here we need to go to the workshops. I got them on my side to start with really.

M  You made them feel they had some control over the learning process.

A  Yeah. It is better to do that than to tell them what to do (laughter).

M  You negotiated with them, was that a key to the success?
A Yes. Because about 2 weeks earlier we had that moderator, that BTEC moderator come round. He interviewed the class and one of the things that did come up in the report was the fact we are teaching technical things that they are not seeing in the classroom * *. This is what they said to the moderator. (*I believe he meant workshops)

M When was this, before the experiment?
A Yes. Christmas.
C Christmas. Yes.
A So it tied up a bit really.
M Your change coincided with what the moderator was after and what the students were demanding?
C+A (both agree.)
Models of reflective learning and more dialogue with and between the students appeared to have provided the ingredients for the success of the action research. Concerns about control and classroom behaviour inadvertently led to strategies that gave students more control over their learning and raised their levels of motivation; as did higher expectations, making more demands of the students, encouraging them to think and be less reliant on the teacher. The teacher effectively enabled these initially reluctant learners to work harder and positively engage in their studies. A range of elements contributed to the positive outcomes for the reflective group; the primary action research was incorporating more reflective learning in classes. The interview itself was a reflexive and learning process for the interviewees. Colleagues do not as a rule spend as much time discussing teaching and learning methods. From the interview responses the enthusiasm of ‘A’ was influencing ‘C’ and both teachers worked through their ideas for future application of reflective learning in their educational practice.

Theory was interpreted by practitioners and adapted to their context. The application of reflective learning was a reflexive process for the teachers. At one level it represents a response to disjuncture; a means of meeting the demands of a new and challenging role. At another level there was a genuine desire to systematically seek to improve practice through action.
research. There was an engagement with theory, the experience of others, openness to consider evidence and willingness to adapt practice in the light of new experience. The action researchers were reflective practitioners in the Usher and Bryant rather than Schon sense. The role of dialogue, the Habermasian 'ideal speech situation' or communicative action, was also evident. A model of reflective learning was applied to practice and judged by the teachers concerned to have improved student learning.

**Case Study Two**

Case study two refers to second year students on an in-service Certificate in Education. The course was validated by a University and taught in a further and higher education college. Students came from diverse education and training backgrounds including college teachers, adult education tutors and trainers from the private industry, the military, health and social services. The students here include both full-time and part-time teachers. Their educational achievement prior to the course varied from the equivalent of National Vocational Qualifications at level III to post-graduate level. The teaching experience within the group was also varied; with those new to teaching sharing classes with experienced but non-qualified teachers. Experiential and reflective learning have been an essential ingredient in the success of the course, which aims to combine an equal mix of theory, practice and reflection.

The action research aimed to provide an experience of learning that did not privilege theory, practice or reflection, but enabled students to engage with all three on a more equal basis. As a tutor with responsibility for the course I designed the teaching and learning innovation used and suggested it to the staff involved in the direct delivery of the module. A number of sources including elements of theory, practice and reflection influenced the design of the action research. A key journal article that connects action learning groups with reflective practice in nurse education (Graham 1995) provided practical example of the possible phases and activities for groups at each stage of their task.
The traditional method of teaching the module included teacher presentation of models of student support. Students were expected to gain knowledge and understanding of the principles that underpin the provision of advice guidance and support. Guest speakers who were allied professionals provided input and classroom activities were designed to enable the students to apply the learning to their practice. With the use of guest speakers there was a risk of the teaching becoming didactic. When asked how the module was taught traditionally a student who had completed the course a number of years earlier replied.

How was it done? It was done by somebody standing up and lecturing about the issues involved in student support and giving references and examples.

The links between theory, practice and reflection were made but the student experience was clearly relatively passive. With this diverse group of students there is a difficulty with a teacher-centred lesson meeting the needs of all in the group. The above quotation, while only representing the views of one student, does not suggest the teachers and speakers capitalised on the wealth of experience that can be found in a class with such a wide range of educational experience. The tutors responsible for the module responded positively and enthusiastically to the proposed action research and recommended adaptations. Without their collaboration, agreement and openness to change the action research would not have occurred.

Graham (1995) acknowledged the need to link theory to practice or use practice to adapt and generate new theories. Action learning groups are a mechanism that can facilitate the thoughtful reflection on experience by practitioners. Action learning enables practice experience to be combined with other knowledge claims and inform future practice. Writing in the context of nurse education Graham (1995:28)argued:

practitioners it can be argued have many 'situations' with their patients/clients. Each 'situation' is filled with much potential for learning and development, yet often this learning goes unlearned and the development is not acknowledged.
The action research here aimed to provide a mechanism whereby students could examine and reflect, with others, on their experience and plan for future action. The aim in part was to formalise and provide a facilitative framework for the reflective learning. Dewey (1916) suggested there are conditions necessary for reflection such as an open mind, commitment to the process, the ability to think through possible consequences of one's action and act on decisions. One educational strategy, consistent with Dewey's approach, includes reflective practice; these are defined as critical thinking by Peters and outlined as a **DATA** model:

1. **Describe** the problem, task, or incident that represents some critical aspect of practice needing examination and possible change.

2. **Analyze** the nature of what is described, including the assumptions that support the actions taken to solve the problem, task or incident.

3. **Theorize** about alternative ways to approach the problem, task, or incident.


The action research in this case study is a variation on the above. In stage one, the preparatory stage, students had some formal teaching input on models of student support and guidance to the reading. The learning process of action learning groups was explained in detail and questions raised by the groups addressed. The students each produced a case study based on their own experience, a case study where a practitioner has presented a problem that required additional tutor support or advice from other appropriate agencies. The case study represented an area that required action and change, one in which the practitioner could benefit from the advice and support of others. In groups of six the class considered and recorded their initial thoughts on each case study presented by a member of their group. These initial reflections on the case studies represented what Peters (1991) referred to as 'Analysis'. In Graham's (1995:32) terms phase one, the presentation of cases, provided a forum for the sharing of ideas and
experience in a trusting and supportive environment, one that would foster creative interaction and present a range of possible strategies for responding to each case study. Stage one was described in an interview with the practitioner as: “they shared the case-studies with other members of the group. Because they were in groups of six there were six case studies brought to each group, and they discussed all the issues around all of them. They then selected three to focus on, and in groups of two went away and researched each case-study ...”. The preparatory stage therefore provided the context of the task and enabled a facilitative framework to be negotiated with the students. This early stage also enabled the groups to focus on their experience and then, with others reflect upon this experience; in Dewey’s terms develop ideas and hypotheses for future action.

After presenting each case study and recording the group’s initial responses each group prepared for the next phase, allocated tasks and responsibilities for stage two, which could be described as an experiential phase. In stage two student pairs carried out research related to their case study. The research was in part library based, examining relevant literature, it also included liaison with other professionals and agencies. When I asked about the potential for a theory practice divide, in that complex life case studies may not be easily resolved through such research activity, the teacher was quite certain that this did not present difficulties.

M ... Was there a problem there, could they find theory that informed their practice?

K Some of them did not necessarily use text books, they went direct to individuals, used pamphlets, leaflets, a whole range of stuff, and I have to say I had a supporting role there, because I advised them about possible sources of material.

M So finding material to support each case-study was not a problem?

K Not a problem, not a problem at all

M So they talked to other professionals?

K Yes they talked to practitioners within the college and elsewhere. They talked to counsellors, they talked to people from learning support, health workers as well.
The use and engagement with both primary and secondary experience was therefore a central part of the task and the focus of experiential stage two.

The third stage of the model corresponds with Peters (1991) stage three where students theorise about alternative ways to approach a problem, task or incident. In stage three the students returned to their groups of six and reviewed the case study in the light of their research findings. The groups of six reconsidered the case study, their initial thoughts and then were presented with the research findings. It was at this stage that they reflected, evaluated and, hopefully, made a more considered and knowledgeable decision about their groups’ final proposal for action. The action researcher described the process:

... and groups of two went away and researched each case study. Okay, then they brought them back to the group and there was an element of discussion and arriving at conclusions really about the way forward for that student, the conclusions were based on the evidence they had gone away and found.

Whether or not the group’s recommendations were acted on would depend on the practitioner’s context, opportunities and judgement. The task was focused on firstly presentation of problem, secondly reasoning and reflection on the problem, thirdly research into secondary experience related to the problem or case study, and fourthly through dialogue the development of a plan for action. In summary each student:

- presented a tutoring (student support) case study from their own experience,
- discussed each case study in a peer group of six,
- on the basis of the above discussion they researched each case study referencing theory and ‘expert’ opinion,
- presented the research findings to their group of six,
- reviewed the case study in the light of the research and discussion,
- produced a plan of action for each case study as a group.
- evaluated each case study and the learning process as an individual.
The above model approximates to the Jarvis pathway for contemplation as reflective learning. If the research activity, consulting text and other practitioners, is interpreted as a form of practical experimentation the model could be said to fit the Jarvis pathway for reflective skills learning. It also clearly connects with Usher and Bryant's captive triangle (1989) of theory practice and research. Following Usher and Bryant (1997) the task was not designed to privilege one of the triad of theory, practice and reflection over any of the others.

The action research was evaluated through a number of sources. The practitioner observed the groups closely throughout the teaching. The outcomes of the task itself provided a point of reference. On completion of the task the students were invited to write their reflections on the task and learning process. The groups also completed standard course evaluation forms and the approaches to study questionnaire. The teacher described the evaluation methods as follows:

M We have now looked at method. How did you evaluate it?

K Well one evaluated it in a number of ways one was by observing, by being present and noting peoples reactions. The second way was through the task itself, obviously, which was tied to specific criteria in the handbook. And the biggest part of the task, from an evaluation point of view, was their own evaluation of the process.

The teacher's observations are very positive, though peppered with self doubt and a reflective and critical engagement with her observations as a source of research data. The task appeared to meet the needs of a range of students who had different levels of experience of the issues. The practical nature of the task enabled all students to add value to their knowledge and understanding of the issues. The teacher's observations are reported below:

M Right so shall we start with your own observations?

K Yes. (pause) In terms of what they learnt you mean?

M Yeah. And how they learnt, yeah.

K OK (pause) I think for some, they took different things from it, I would suggest. Some of them were (pause). What we wanted from them was an
awareness of issues around student support we wanted them to focus on
students as individuals and we wanted them to be aware of the range of
support available, and also be aware of their own boundaries as teachers.
I think for some of them the kind of attitudes and approaches to that area
were already in place, some of them used the task to develop their
knowledge about the range of support that existed and also tools – ways
of dealing with issues around student support. … For others I think it was
more dramatic than that. I think there were others who really had not
considered this at all and who came away at the end of the task with a
new perspective on the area of student support. So that is more dramatic.
But I was thinking about that and I was thinking well how far can I really
say that their perspective had really changed and how far were they just
trying to meet the requirements of the task and I am not sure you can
judge that. I mean you maybe can pick up some of that from the
observation and through discussion and through the final reflections. But
it is possible that it is a con on some peoples’ part. You know I would say
it is more likely that you had that level of change. Than you would, say,
with the traditional learning situation.

M Did they themselves report a level of change?

K Yeah. Yes

M Did they need to?

K No. But its, there are all sorts of issues about trying to please the
person delivering the session … But I’d say it, maybe I am biased towards
this type of approach. But I would say there is definitely more likely to be
that kind of change than there would be in a traditional method.

The interview here is itself a critically reflective process for the teacher, there
is almost incredulity that learning represented such a dramatic change for
some, and a consequent self-doubt about the validity of the observations, a
self conscious, reflexive, awareness of how one’s own perspective can shape
our way of seeing. The interview provided time and space for the teacher to
think and reflect upon practice as such it could be said to be a learning
process for both participants. Alongside the working through of the evidence
and argument the conclusion remained; that the action research improved
student learning when compared to the traditional methods. The teacher
reported that the learning process resulted in considerable movement and re-
evaluation of individual learner’s original position and thoughts on the
subject. Those students whose original ideas were reinforced gained other
learning from the task; they discovered the mechanism, tools and resources available for supporting students.

Two learning pathways emerged from the experience and were reported by the teacher. Firstly, students reflected on the case study and through a process of research and further reflection gained confirmation that their original ideas provide the best way forward. Through the action learning sets they were able to make more knowledgeable decisions. The second learning pathway resulted in them modifying their original plans as a consequence of research and reflection.

M  Was another where they would have a discussion come to an agreement, go away, research, come up with an alternative?

K  Yeah, come back and say “you know this would not really work” or some there were issues around “this is what would work ideally but it is not possible because of x, y and z”.

M  Did views change as a result of third party research?

K  Yeah, I would say, it wasn’t really dramatic.

M  Is it fair to describe those two kinds of pathways?

K  Yes, pause yes.

M  Which would be most typical do you think - change or confirmation?

K  Confirmation. I think ...

A potential problem with action learning sets like these is that the cycle of reflection is relatively closed. Learners are exposed to third party ideas, but largely determine and research on their own agreed agenda, a case study is discussed and researched with a view to recommending a course of action. There is no guarantee of a detached critical analysis, beyond that provided within the group. Group consensus rather than conflict within groups appeared to be the norm. When asked about how they engaged with each other the teacher responded:

K  Yeah, because what you get is the two who go away and did the research take on the role of expert they come back with resources and an area of knowledge that they developed. So you get more confidence and
you get more - well you get the rest of the group defer then, to the people who have developed this expertise. That’s interesting so that may be the agreement.

M It becomes a lecture, presentation?

K No, no it is still interactive. And another point about that is that from the early discussion the line the research will take has arisen out of that really and everyone agreed with that.

M So they have a consensus on the questions for further research?

K Yeah. I think so. For me there was very much a group feeling there. You know you didn’t have people going away and saying that was a load of .. (swears).., I am going to do it this way.

It is this self referential aspect of the action learning set that reveals a possible short-coming of individualised models of learning. With an emphasis of theory, practice and research what is perhaps missing is the wider context, a macro position, and an ability to stand back and look at a problem from a radically different stance and perspective. To use a Wittgenstein analogy, perhaps these action learning sets have not looked at a problem through a different set of glasses. This theme will be returned to later in the conclusions. In terms of learning outcomes the teacher described the students completed written assignments as: “very good. Generally speaking very good. There was maybe one exception, one or two exceptions perhaps it was informed it was thoughtful and it showed - it showed they had used sources.”

With this case study based on in-service teachers completing a Certificate in Education it was relatively easy to get detailed feedback from the class. Each student provided an evaluation of the learning process. The action research method of using action learning sets with a clearly structured experiential approach to learning was clearly a new and radically different experience for many of the students. With one or two exceptions the word ‘enjoyed’ was frequently reported in the student evaluations and the benefits of forming closer working relationships with their colleagues highly valued. Yet adjusting to the new method of learning was clearly an area of concern. Students were uneasy with the level of self-directed study required and
clearly took time to adjust to the requirements of the task and expectations of
the teacher. Many learners would have preferred more direct teacher input:
"... I would expect more input from teaching staff and fewer hours spent by
students." (student evaluation of learning in case study two). However the
same student concluded: "The group exercise was very useful, helped with
my reflective development – and enjoyable".

The other disadvantage of the process reported by the students was
absenteeism. With each student allocated particular tasks and others
depending on those tasks being completed there were tensions whenever
someone was absent. One student recorded the problem as particularly
difficult for part-time students; "We did not all have access to a
communication system that the research essay could be sent back and
forward on so that we could all have shared input e.g. fax or e-mail". Many of
the students posted their responses to an online conference set up for the
course, thereby widening the means of communication and extending the
potential audience and participants. A limitation of the online conference was
that not all students had Internet access when not attending college.

The students recorded the pros and cons of the learning process, the views
of the learners are captured in this account from one student’s evaluation
report. The example raises a fairly representative list of the advantages and
disadvantages identified by the class in case study two:

Disadvantages to group work were as follows:

- Absenteeism (This was from a collaboration point of view than a work
  sharing one)
- It was difficult to meet outside college hours for various reasons
- Different job cultures made for expressing information differently
- Without clear direction we did not work together
- Sub groups could form quickly and go off at tangents

Overall the advantages outweighed the disadvantages and they were:

- Enjoyment – it was an enjoyable experience
• Enlightenment – seeing problems from other peoples perspective and points of view.

• Communication and teamwork – We all know everybody in the groups much better than we did before and are more likely to work for each other harder in the future if required.

• Learning from one another – this ties in with the second point and for me meant that people would bring up a point that only they had thought of. This then made the whole group feed off this idea and pursue it perhaps further than the individual would (or could) have done on his or her own.

• Experience – everyone’s experiences are different and the interaction between us shared this experience and knowledge amongst the group broadening everyone’s horizons.

(Student report on the experience of the action learning process in case study two)

Table 8.4. A Comparison of ASQ Mean Scores on a 5 point Likert Scale 0-4

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<tbody>
<tr>
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<tr>
<td>Gibbs (1992:204)</td>
<td>38.16*</td>
<td>36.00*</td>
</tr>
<tr>
<td>Case Two</td>
<td>47.52</td>
<td>34.17</td>
</tr>
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In terms of course work outcomes all students successfully completed the assignment and only one out of thirty-five had to resubmit the task after making amendments. The group also completed the approaches to study questionnaire and recorded a deep rather than surface approach to study.

The students’ response to the action research was generally positive; the advantages of the method were judged to outweigh the disadvantages. The students frequently recorded a benefit of the exercise as being the exposure
to other practitioners with a different perspective. The two quotes below illustrate their response:

The group discussion raised problems that I do not see in my teaching environment and so discussing solutions has given me more avenues to consider.

The research findings of this case study really surprised me, I hadn’t realised the enormity of help and assistance a profoundly deaf person could receive, but as it has been pointed out they would only receive it if it was known to the college.

(Quotes from students in response to case study two)

These quotations from the students’ evaluations perhaps challenge the observation made earlier that the learning could be self-referential and lack alternative perspectives. However, these practitioner points of view are perhaps quite limited to what Argyris and Schon called single loop rather than double loop learning.

In single loop learning, we learn to maintain the field of constancy by learning to design actions that satisfy existing governing variables. In double loop learning, we learn to change the field of constancy itself. (Jarvis 1998:59)

Such high level learning may be beyond the remit of this task, which is orientated towards a set of vocational skills. However, I would suggest that challenge to future development of this case study experience is to provide an element of double loop learning. This could be stimulated by further teacher input, which the students’ feedback suggested would have been welcomed.

The difficulties adjusting to a change in teacher expectations and a radically different way of working perhaps reveal a problem with this case study in action research. The teacher recognised more work could have been done here:

M What improvements would you make?
I would, - I might - be a bit more directive at the beginning about exactly what they should be doing. But other than that I don’t think I would change anything very much really.

Interestingly this quote is consistent with the feedback from the class, an earlier quotation from the interview with the teacher gave a different impression.

... I was quite careful about explaining it, I did revisit the exercise at the start of each week. Yeah I basically told them what needed to happen and each week I told them where they should be, what they should have so far and where they should be going and doing in that session. It was just about keeping them on task really.

What is interesting is that the teacher remains keen to be directive rather than participative, the students are not envisaged as having any control over the overall learning process. The case study has limitations in the extent to which it represents participative action research for the students.

As course tutor I designed the learning process, which was in turn accepted, adapted and implemented by the staff teaching the module; my role was as a facilitator. In terms of teaching staff the case study provided an example of participatory action research, but such participation in determining the overall learning strategy was not extended to the students. As a consequence the students, though reporting the benefits of the process, clearly had some difficulty adjusting to a new way of working. Genuinely participatory action research would have included the learners in determining the research design, and these groups would have benefited from more consultation and discussion about the learning strategy. For the students the case study produced an unfamiliar learning process, to which they responded positively, even though they had limited say in the overall design. The theme of student participation in the action research design was one that emerged in other case studies presented here, and will be considered in the overall conclusions in chapter nine.

In terms of models of reflective learning the Kolb model was judged by the teacher to be too prescriptive, all the elements were evident in the learning but did not necessarily occur in Kolb’s order. When shown three models of learning the response to Kolb was:
This task has all the elements of that one (pointing to Kolb).

The Kolb.

Yes, but I am not sure they follow it that, necessarily in this cycle.

Yeah so that was not the closest. Yeah.

The teacher expressed unease about thinking about the learning in terms of the models because "you do not think about it in those terms do you". When asked, the Usher and Bryant model was seen as the most accurate reflection of the learning process followed by Jarvis' model and lastly Kolb. The criticism of Kolb made was consistent with the critique of Kolb provided by Jarvis (1988) that it is too prescriptive and therefore difficult to generalise from. When asked if she would recommend the teaching and learning method to others the teacher simply replied: "Yes – It works"
Case Study Three

Case study three took place with groups of trainees in a profession allied to medicine. The entry requirements for the course were five GCSEs grade C or above. The students were mostly aged between nineteen and twenty five years of age. Prior to the action research the teacher described the teaching of the course as simply teaching to pass the exam; "everything was crammed into twelve months". The teacher had recently experienced the same course being taught with a different, more reflective ethos, one where students were encouraged to research and discuss questions rather than articulate set answers. It was the exposure to an alternative approach coupled with the experience on a Certificate in Education that prompted the action research. This is how the teacher described the students from the more ‘reflective’ course:

M  These students have a different approach?

D  They certainly have, they are a lot more independently minded in that they can ..(pause).. if you ask them a question about something they would be able to discuss the question rather than give a set - a set answer. In a way they express a much more, a deeper learning to the subject.

With the traditional method of teaching this course the students were schooled in reproducing set answers to questions that would most likely appear in the exam. The teacher had reservations about the level of understanding the traditional approach produced in the students and believed that the students who had experienced a more reflective approach to the subject had a ‘deeper’ understanding. The teacher was familiar with the literature on deep and surface learning and that of reflective learning. Which appeared to make sense of his experience and the approach adopted on his courses.

Case study three has many similarities with case study two. There is considerable overlap with the theory that underpins both case studies. The theoretical background will, therefore, not be repeated here. Perhaps a difference is the conscious use of the concepts of deep and surface learning
by this teacher, who aimed to nurture a deeper approach to study and more reflective practice. Another difference between the case studies was that rather than dealing with practice, as in case two, the students in case three were focused on researching theoretical knowledge. This case study the student-centred action research contrasted with the traditional methods of teaching which were described as straight lectures where students sat passively in rows.

The teacher described the lessons as starting with a thorough exploration of students’ prior learning; a question and answer session explored the issues, and raised questions for further investigation. In pairs the students researched tasks that applied theory to their professional practice. Guided by the teacher, the students researched their topics by visiting specialist libraries and local hospitals. Students then presented their findings to the class as a whole and in effect produced for each other comprehensive sets of class notes on each subject. The students were said to return buzzing with information and new ideas for further enquiry: “They would come back with excellent, excellent reports”. The teacher in turn facilitated the presentation and discussion, then marked, edited and circulated the reports from each group.

The method is consistent with the Deweyian DATA model of Peters discussed in case study two. It can also be said to follow the Jarvis model of contemplation in that the research is essentially using secondary sources as a form of evaluation. In a report on the action research the teacher described the action research with reference to Jarvis’ model following the pathway:

- Experience through research
- Practical experimentation through presentation of ideas to peers and tutor
- Reasoning and reflection through discussion with peers and tutor
- Memorisation as preparation for the exam
The teacher acknowledged that he tried to use the Jarvis model but commented: "I must admit we have not followed it entirely". Instead the practitioner interpreted and adapted secondary experience (theory) in his own context.

In addition to Jarvis' model the teacher was also aware of the literature on deep and surface learning, he used the concept of deep learning along-side that of reflective practice. The research followed a strategy for fostering a deep approach to learning, recommended by Graham Gibbs (1992), that of independent group work:

This strategy focuses mainly on the element of interaction. Interaction between students is also inherently motivating and encourages a range of learning activity. Methods which emphasise independent group work include group-based project work and peer tutoring, in which students teach each other. (Gibbs 1992:15)

The teacher was clearly impressed with the high standard of work produced by the students and reported that they enjoyed the learning process. Gibbs (1992) discussed the development of learning skills as another strategy for fostering a deep approach to study. This would appear to have been a positive consequence of the action research the teacher reported in interview; "I think what they got out of it was they learnt how to study a subject".

Greater use of questioning by the teacher was another consequence of the action research; the teaching style changed to incorporate questions of higher order skills. The teacher used more questions that probed understanding rather than recall; in practice the action research was expanded to include more extensive use of question and answer. There was a reflexive process within this case study. The teacher was seeking to explore ways in which he could encourage the students to adopt a deeper approach to study, in doing so he adopted a much more reflective approach to his teaching. The teacher extended the use of question and answer techniques and queried teaching and assessment traditions.
The emphasis on reflection and deep approaches to study changed the expectations of the tutors, following the research the teaching team were said to have started expecting and looking for higher order answers when marking students’ work: “We were as tutors thinking a little more deeply about what they were writing.” Later in this part of the interview the action researcher stated that tutors had started to look for a deep approach to learning in the students’ work: “I think that’s what we’ve done really. Yeah! Which is quite frightening really. It takes twice as long to mark essays than it used to and they are ending up with lower scores”. The lower scores occurred at the start of the project; they later improved. The teacher attributed the assessment results to both changes in the method of working for the students and higher expectations on the part of the tutors, so that assessment scores are revealed as subjective judgements altered by the process of investigation itself. Consequently even assessment scores as research data need to be treated with caution and viewed alongside, in conjunction with, other sources of information. An unintended consequence of the action research was that the tutoring team was reported to have changed the way they attribute grades, more was required to achieve each grade. With reference to the assessment process the teacher commented

M  You had higher expectations?

D  Yeah, yeah. Exactly. Exactly. Previously it was “yeah most of the points there, black and white points, yeah its not bad, yeah its 15 or sixteen” but now, now, with this (the action research) we think more carefully and Urm, we have to find more points to look at, we even look at how they write a sentence … what do they really mean by that sentence.

The teacher noted that both students and tutors found it hard to adjust to the changes. Reading the interview transcript long after the event there are comments which suggest the action research itself was not entirely practitioner led, but in part driven by other line managers, not myself, the teacher and his team. The teacher talked of being told to implement the change and having to bend a little himself. I did not pick up on these comments at the time and believed the action research was practitioner led.
with my support, permission from others was expected, but the following examples from the interview suggested direction.

D They were told this is the way you do it. I've had to bend a little, to be honest. I was happy to do it, because once I had seen the change I felt that it was important. The students struggled with the change. They now write essays in a more reflective way, and you now see that in the marks they are on the increase now. ...

D ...The line manager she developed a lot of this she came in and suggested this way, and it just so happened I was doing this course and thought it a great idea.

Earlier in the interview he states that he found it hard when senior people to him came in and wanted to change things, but it is not clear if these changes refer to the action research. Such direction by a line manager created a source of tension for the teacher and possibly indicates that the action research being less democratic and participative then originally intended.

The teacher reported that the students preferred the more reflective student centred methods of teaching: “I've asked them in turn. How do you like this, do you prefer it to the traditional method? They all say yes. Unequivocally. I ask them why they say it gives them more freedom.” In terms of the student experience the teacher was very positive and acknowledged the benefits. The action research clearly put pressure on the teaching staff; the increased workload was a theme he returned to when discussing the disadvantages of the action research project.

For the tutor it is a different approach. All my lessons are fully prepared using a didactic approach. They are just sat there in the drawer now, I don’t use them. It is quite time consuming for me, marking takes longer, preparing worksheets takes a long time, but we should get over it with experience. Looking at the opportunities Urm, I think there are a lot of opportunities to expand our learning about the depth of a subject. That’s a thing, it has taught me as a tutor to look more deeply at something, and I believe it has done the same for the students. So once again if they are asked a question it is not black and white it is more 'well I was reading this and realise that ...' It is a great opportunity for that.

The teacher also used the FEASQ no comparative sample was provided, so the results were compared the results to those provided from other studies.
In addition to reporting a higher meaning orientation to study the students scored quite highly on the reproducing orientation relative to the other studies on undergraduates. The student score for a meaning orientation was as expected, higher than their score for a reproducing orientation. The teacher expressed confidence in the questionnaire and its administration.

Table 8.5 A Comparison of ASQ Mean Scores on a 5 point Likert Scale 0-4

Comparative results for Case Three sample 12 students

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<tr>
<td>Case Three 1997</td>
<td>45.16</td>
<td>40.5</td>
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The outcomes of the project in the opinion of the teacher were very positive for the students. After an initial drop in marks the grades improved, the teacher was convinced the standards increased along with the rising expectations of the tutors. The outcomes of the ASQ did not contradict the judgement that the students adopted a deep approach to study. The research project started out with the aim to nurture a deep approach to study and more reflective practice by his students. The teacher believed the project achieved this and a deep approach to study.

Looking at the case study from a more sociological perspective, it fits the reflexive modernity thesis. Here we had a teacher confronting new information and change, abandoning his traditional methods in the light of that information and change then reflexively reviewing his own practice when confronted with better performance by his students. When asked to sum up his experience of the project it was his own development as practitioner, rather than the learning of his students that once again comes to the fore.
Certainly it was something I had not really done before it was brand new. What I found happens to you as a teacher is you just get into, if your not careful, is you get into automatic mode and you churn out the old stuff every time. Whereas it (the action research) certainly made me think about what I am teaching, and hopefully, hopefully, I am now teaching them in a more self motivating way, to go out and learn more, not just tell them, but to research further. So hopefully that is working out with them. I certainly feel this reflective learning helps the students it helps them to be more prepared to face the challenges of life and work. For my students going out to face their patients without the tutors' help, they will be more ready for that.

When asked to consider the action research with reference to three models of reflective practice the teacher explicitly attempted to apply the Jarvis model to his teaching and preferred this model to those of Usher and Bryant (1989) or Kolb (1984). The critique of Kolb discussed in earlier chapters was reinforced by the comments of the teacher, he felt it was too linear that a model of learning needs to be more flexible.

Kolb is a bit out-dated now I feel you know, you do need to swap and change between practice and reflection or theory and experience. So unless the arrows are added or you go in both ways it may help.

Having tried to adapt and apply the Jarvis model in the action research the teacher remained very positive about its practical value:

... I think this is a good model (Jarvis) it makes you think a bit more about what you were doing and what it was leading to. That's why I like the model it gave me some targets to aim for and I could work with that.

The teacher was not familiar with the Usher and Bryant model and constructed his evaluation of it as a consequence, and reflexively, through the interview.

In a way Jarvis and Usher and Bryant are very similar, Usher and Bryant looks very simple and I think can be used quite sensibly. I initially thought that was a better one, but on reflection (laughter) Jarvis here urm does go back and forth, and certainly he talks of the person it does flow quite nicely between all stages, and I think I would put Jarvis as number one with Usher and Bryant second and Kolb third out of the three. It gives you more to think about, I think, the Jarvis one.

Once again the reflexive nature of research and for that matter interviewing is evident. Knowledge and understanding for the interviewee and interviewer is
actively constructed through the process of thinking and responding to interview questions. The relationship is one of research participants rather than researcher and subject, the interview was framed to gain an understanding through dialogue on a shared experience of action research. The interview provided time and space for participants to reflect upon the issues and develop an understanding of events.

Reflective learning occurring through the reflexive nature of the interview was evident. During the interview the teacher verbally works through his thoughts on the Usher and Bryant model. He weighs up the pros and cons, relates them to an evaluation of Kolb, warms to the Usher and Bryant model and then, with laughter, returns to conclude he preferred Jarvis’ after all. The reasons are that the Jarvis model is flexible has the person at the centre, is logical and also reflects most accurately how the teacher, in case three, himself learns.

Case Study Four

Case Four consisted of sixteen students, eleven females and five males, studying a short marketing module as part of an Higher National Diploma in Business Studies. The teacher was new to the group and the department. The majority of the students had joined the class after completing their A'levels. The students were given a ‘structured learning guide' based on set textbooks, which was similar to an open learning package in guiding the students through their reading. Students were required to study the theory from textbooks prior to the class and then apply theory to practical examples in class, where they would discuss the exercises and questions with their peers and tutor.

The teacher looked again at the course design in relation to Jarvis’ model and believed the course design was consistent with reflective learning. The course provided a mix of learning from primary and secondary experience. There were opportunities for students to apply their learning, to actively experiment with ideas and to gain simulated practical experience through
case study examples. The teacher argued, that at the start of the research, reflective learning was not taking place, since students were not completing the reading and were therefore unprepared to engage in a meaningful way with the case study material in class. As a consequence the teacher would then spend the class time explaining theory.

The initial phase of the research did not appear to work, the students were unprepared for the case studies and although given a structured learning guide to the literature they did not complete the preparation necessary for the class activities. Rather than abandon the innovation the tutor decided to challenge the students with the issue and evaluate the learning process. The evaluation tool utilised was nominal group technique. Both teacher and students agreed the class sessions were not proving productive and through the evaluation the students produced a blue print for the lessons. The students chose to adopt a method identical to the one originally imposed by the teacher. The difference was that now the students had agreed that they would study the theory at home and come prepared to participate in the application of theory to examples provided in class. Giving the class some control over their learning, was pivotal to the teaching and learning innovation moving forward. From this point on the teacher believed that project was successful.

Once the students had agreed to the teaching and learning strategy an element of peer pressure emerged, in that peer expectations encouraged students to do the preparation prior to lessons.

L Yes. In fact another point came out. Which was that the students that had not done their homework - it was very subtle it was not done through anything actually said - but they were not included in the exercises and discussion. They felt uncomfortable because they could not participate. Previously I saw student sharing by copying each others work. That was no longer going on anymore.

Having got the students' agreement on the teaching method, the class completed the necessary preparation, classes were now used to confirm understanding of the theory and to examine case studies. Students worked
individually in a variety of group combinations, and provided a range of responses to each case.

M Did different groups come up with very different solutions?

L Yes they did. There was scope for that which was good. A lot of the case studies were done in such a way that there was not a definite answer. Which is the nature of marketing, and that was good and that was my role really. Pulling all of that out and giving different scenarios as to, well, there are several different ways to skin a rabbit and which of these.... the skill in marketing is choosing which one you think is appropriate.

However, the teacher was disappointed with the outcome of the assessed coursework, since the grades achieved did not fulfil her expectations. The course assessment was blamed for the lower than expected results, since the assignment appears to have been written for another course, of which the students did not have experience.

L Certainly that’s what is required by the assignment. The assignment was in my opinion a good one, it was well written. It was actually done for the first level of the Institute of Marketing, this case study, which is a higher level than HND because if you’re doing a Chartered Institute of Marketing syllabus you are already working, so you’ve got work experience as well. The assessment required some knowledge of the health service and how it functioned, now whether they have covered that in other subjects I don’t think they had, there was one or two students who had some knowledge of the industry, because their parents were involved in it. In fact they did very well on the assignment. But overall the results were disappointing. They did not show those high order skills, and also they were required to write their assignment in a report form, which they had already been taught. Very few stuck to it.

M Have you anything to compare the results to ...?

L Mmm half a dozen students who I would have considered at least merit standard in their work and their results having done three tests were promising ... and the interaction in the class sessions towards the end of the semester would have indicated that they would have gone into a lot more detail and adopted a deeper approach to this assignment, it was superficial

M The course-work?

L The assignments, yes. I think partly it is the fault of the structure, the structure of the course. The assignment was not given to them until something like two weeks before the end of the course. I think they should
have had a lot more time and a lot more help not just to come up with the right answer, but actually to process it properly.

Given the number of variables in operation it is difficult to unravel the significance of these comments on the assessment results; the teacher was also referring to her 'expectations' when judging the grades. When asked if she had any data from other courses with which she could compare the results she talked of another class in a Media department where she had tried the same methods. Here the method of teaching was more practical with the emphasis on applications rather than theory. With the Media course students were given more freedom to negotiate their task from the outset.

I can think about an HND course in Media which was teaching a specific skill, advertising and copyrighting. That was a year course. The method of teaching was much more practical, and yet, I need to think about this – they are developing practical skills but they also have to come to terms with marketing concepts and campaigns. It was taught through practical application, so for instance a multi-media campaign for a charity for instance - the problem, or the opportunity for the campaign to fulfil and then they have to design an advertising campaign to meet those objectives.

... 

L Which is another way of teaching the same sort of approach that the business school students had, but it was much more theoretical and out of the two courses I would imagine that, I know that the advertising copyright (media) students got more out of it. But whilst the structure of the course was good the theory was good, it sounds good it follows the Jarvis cycle, the theory was too dry there was not enough opportunity to actually mmm ... (pause)

M Did the media course follow the Jarvis cycle?

L Mmm. Yes it did over a much longer period and in fact the students evolved that themselves rather than have it imposed on them.

M They negotiated? So the media structure reflected the way the students learn and they had some control over that process?

L Yes

Negotiation and practical problem solving around authentic task selected by the students would appear to have produced a higher quality of student work from the media students than those doing Business Studies. What is
surprising is the extent to which vocational courses such as HNDs are described by the teacher as theoretical rather than practical, her experience with the media course, with an emphasis on learning by doing, was seen as the exception rather than the rule.

M Is it true to say the business course is good on theory and media good on practice?

L Yes

M So the problem solving nature of the media course forces the students to be creative?

L Yes. It brought in the business discipline in the way the assignment was structured. So the teaching was geared towards you know target audience, objective, identifying what the product is, the place, the cost of it and no it was much more an applied process than the method taught on the business course. Quite interesting really. This is the first time I have really thought about that, as a method of teaching.

M That raises the importance of learning by doing as part of reflective learning?

L Yes. Which is unusual for an HND course in terms of my own experience of HND.

M Which is unusual the media or business course?

L The media department. Because it's a very - you've got to do it.

M That's interesting, my expectation would be that HND is more vocational and more practical. You are presenting a business HND that is quite theoretical and abstract.

L Yes. And marketing theory can be exceedingly dull.

M What were the outcomes with media, what were the results.

L Excellent results.

The teacher also used the ASQ with her students, once again no comparative data were established. The facilitative framework encouraged teacher to test students before and after the action research or select a control group, this did not occur. The results were simply collected at the end of the module and compared with other studies. Once the teaching method was agreed with the class the teacher believed that the students had adopted
a deep approach to study during the course. This conclusion is consistent with the findings of the ASQ where the students scored higher on the Meaning Orientation rather than Reproducing Orientation.

The teacher's comments on the summative assessment suggested the students scored well when reproducing knowledge for the exam and less well when they were expected to present higher order cognitive skills. The course outcomes in this case are therefore mixed. The teacher is convinced the innovation worked for these students and with others with which she applied it. One group gained excellent grades the other was 'disappointing'. The results of the ASQ are consistent with students adopting a meaning orientation to study. The students only responded positively to the action research once they were given some influence over the learning process, and perhaps this is the critical factor here in improving students' learning.

Table 8.6. A Comparison of ASQ Mean Scores on a 5 point Likert Scale 0-4

<table>
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<tr>
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<td>34.23</td>
</tr>
<tr>
<td>Gibbs (1992:204)</td>
<td>38.16*</td>
<td>36.00*</td>
</tr>
<tr>
<td>Case Four</td>
<td>44.43</td>
<td>41.92</td>
</tr>
</tbody>
</table>

An interesting feature here is that the course design could be defined as consistent with a model of reflective learning. This is exactly how the teacher defined the course. The structure and assignments, however, were simply delivered to the students. The HND business studies students had no control over what they learnt or how they learnt, and as a consequence they initially resisted the imposition of the action research by the teacher. In contrast, in another department where the teacher adopted a similar course design, the students responded positively and achieved excellent results. With so many
variables it is difficult to make direct comparisons between a teacher's reported experience with two groups of students. Although, a key difference would appear to be that on the more successful course there was greater flexibility for the students to negotiate the content and process of their learning.

M ... By default you made it more reflective in terms of the process of learning as a way of dealing with problems in the classroom.

L Yes. By engaging the students yeah. Yes. But that was still prescriptive for them and me. Whereas the HND media had a lot more free reign around two assignments, but a lot more flexibility from their point of view in how it was structured. If you go by the results the media course was more successful in terms of grades (pause).

As well as presenting a model for providing students with more control over their learning, there are also lessons for action research. Usher and Bryant use participative action research as a model of reflexive research. Both this and the previous case study were intended to be participative in the way that I worked with classroom tutors in attempting to improve students' learning. However, in both these case studies participation was not necessarily extended to the learner. In case four, once the learners were given an opportunity to shape the learning process they endorsed the innovation and co-operated with the process as ‘their’ preferred methods of learning. When asked how they would conduct the module next year the teacher said she would mirror the media course and give the students more control over their learning.

The teacher had consciously attempted to apply Jarvis’ model of reflective learning in the teaching of her marketing module. When asked to evaluate three models of reflective learning (Jarvis, Usher and Bryant and Kolb) in the light of her understanding, Jarvis’ model was judged the most likely to improve learning, while Kolb was regarded as too linear and deterministic. The Usher and Bryant model was viewed as an improvement on Kolb because it was less deterministic, enabling the learner to move back and forth between theory, practice and reflection. Jarvis was preferred because it revealed the complexity of learning and in a reflexive way stimulated
reflection about learning by the teacher herself; “This one (Jarvis) gives you more to think about, and is good from that point of view, because you think about the process.”

**Case Five**

This study was with a group of catering students studying 'Field Catering'; that is the provision of meals by mobile units of chefs; the food is usually prepared and served from tents using specialist field-catering equipment. The teacher described the course as a 'mini engineering course', a conversion course for chefs who learn how to operate and maintain field-catering equipment safely. It is highly specialised and therefore outside the National Vocational Qualifications (NVQ) Framework, though the teacher equated it with NVQ level two. The teacher was a team leader for six staff teaching the course. The students were aged 16-35, some were being introduced to field catering others were returning to the subject as potential managers of Field Units. Experience and ability was therefore mixed. At the time of interview approximately 120-130 had experienced the action research innovation over a number of different courses. The scale of the project was therefore quite different from the other cases which focused on one or two classes.

Given the nature of the skills being taught and the diverse environments in which chefs would have to operate, the teacher strongly believed that reflective learning was essential to successful practice. One could not predict the precise circumstances these chefs would meet in the field; they would have to adapt their skills to the environment they were in and the resources available. As the teacher put it:

> The reason why reflective learning suits us as I believe it suits many practical subjects is that you can't allow the students to experience everything that they may need to do.

It is therefore the fast changing circumstances of the students' future practice, the characteristics of reflexive modernity, that makes reflective
learning essential for the vocational learning this teacher was seeking to achieve.

M  It (reflective learning) enabled them to transfer skills?

A  It does yeah! You can’t, it isn’t a sterile trade training or vocational training, they need to adapt: ...

The teacher recognised there was a need for change because of field problems experienced a few years before. He felt there was more to teaching than what was traditionally practised in his organisation; working with people as a manager had convinced him of this and attending an in-service teacher training course confirmed his thinking and encouraged him to innovate. He was critical of the competence-based approach that had been adopted. He described a consequence of this as a form of teaching to a formula consisting of demonstration by the teacher, imitation by the student followed by a tick in the assessment box. The teacher was concerned the students had merely reproduced the behaviour on one occasion rather than demonstrating their learning of a skill.

The project continued the teaching process of explanation, demonstration and imitation for the first stage of the learning. The second stage consisted of a method the teacher referred to as 'coached practical assessment' where groups of students were given a series of tasks to perform, of which the teachers made extensive use of question and answer, encouraging the students to explore a wide range of 'what ifs'. This enabled students to demonstrate their understanding of practical skills. The managerial groups were asked to produce a report of issues raised on the field tasks. Once again the teacher emphasised the need for the students to be adaptable:

A  ... because we cannot say that this is the absolute way of doing something, the environment can change. The situation can change, they may be running a kitchen, or working in a kitchen where they are feeding 100 or a kitchen where they are feeding 15,000 meals in twenty four hours. They need the understanding we could not set up all the scenarios in role plays.
The teaching changed from a simple imitation of a set skill to problem-solving and task-centred learning facilitated by the teaching team. In addition to practical problem solving tasks the students were given a thorough debriefing at the end of each session. Rather than the teacher-centred feedback, which was the tradition, the debrief was more informal. Students were encouraged to give their opinions and evaluations of the sessions and identify areas in which they need further support. There was considerable discussion amongst the teaching team about the innovation both before and after the action research. Both students and staff were given opportunity to provide feedback and opinions on the process. Within the students group the trainee managers had their feedback session together with the trainees they were managing. In a sense this represented a form of three hundred and sixty-degree appraisal, having a similarity with Kurt Lewin's experiments with T-groups. He challenged convention by allowing training staff and trainees to participate together in the debriefs (Kolb 1994:9).

The teaching innovation was reported by the teacher to have enabled the course to reach a higher standard quicker. It supported communication within groups and helped establish shared aims between trainee managers and other trainees on a team. It was the group nature of the debrief that was the key innovation, previously students were given feedback only on a one to one basis by the teacher, not as a unit evaluating their own performance. The innovation was said to be more demanding on the teaching team, yet they preferred it and believed a higher standard of learning was being achieved.

M They (staff) are working harder and reporting that they are enjoying it?
A Yeah, and their reporting that they are happier with the standards.
M What evidence do you have on standards?
A the evidence that we have got. Their ability to problem solve has definitely improved. There is no doubt about it. On the role play the final exercise, a week long, they go out and they feed real ... (people) in real field conditions. The standard there has improved, the team work has improved, the accident rate, (pause) I shouldn't say it, and touch wood, is ... erm ... ninety percent lower, so that is superb.
M  You see that as linked to this method?

A  Oh definitely yeah. Because they have got understanding of, I say understanding because it is, they have got the knowledge of the implications ......

The action research had taken place on a number of courses over the four months prior to the interview. The first classes to have completed the course had been placed at work for nearly four months and feedback from Master Chefs in their units was reported to have been “very very positive about the students” working in field kitchens.

M  So you have feedback on your students four months after you trained them?

A  Yes. At the moment its verbal, I intend after six months, to send out a written, not report so much (pause). The verbal feedback has come back in a way that Master Chefs, mainly in Bosnia, 3 of them have said that on the field practice side, in the past they have always given direct commands and the students would stop when they had done something, but now the students asked ‘shall I do this next’ because they were more comfortable, more confident I feel they are able to take more control.

Yeah.

The students were all tested on their knowledge of facts related to the equipment. There was a concern in the course team that the average marks achieved in these test results had dropped. The action researcher checked this concern and found that the class average was three percent lower than the year before. The test results before and after the action research are recorded in the table 8.7. The action research project did not improve the student scores of this particular test, although when tested for significance using a one tailed T-Test for independent samples ($p \leq 0.05$), the decline in scores was not significant ($P \leq 0.05$). There was therefore no significant change in students' assessment grades.
Table 8.7 Student Assessment: Case Five

<table>
<thead>
<tr>
<th>Control Groups</th>
<th>Action Research Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Students</td>
<td>Mean Percentage Score</td>
</tr>
<tr>
<td>7</td>
<td>88</td>
</tr>
<tr>
<td>7</td>
<td>88</td>
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<td>11</td>
<td>92</td>
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<td>7</td>
<td>88</td>
</tr>
<tr>
<td>7</td>
<td>91</td>
</tr>
<tr>
<td>18</td>
<td>86</td>
</tr>
<tr>
<td>Totals</td>
<td>57</td>
</tr>
</tbody>
</table>

Using a t-test for independent samples (p ≤ 0.05) there was no significant difference between the scores (p > 0.05).

The teacher also noted that there was a lot less teaching to the test by using old question papers, during the interview he made this observation:

A ... But I am also impressed because there is use to be a lot of teaching for testing using old question papers, whereas that has stopped now. There isn’t any need for it. The instructors now (pause) I hadn’t really thought of that, they don’t now ask for old question papers.

M There is less cramming?

A Yeah! So they must be more comfortable now. But after researching it the three percent could have been negligible.

When asked if the test itself focused on understanding or recall, the teacher responded “No it tests recall ... its is testing knowledge, what is the weight of a container and ...”. There is clearly an issue here with reflective learning, students have been encouraged to focus on higher order skills, but summative assessment was still geared to what could be termed a reproducing orientation to study. Gibbs (1992) observes that improvements
in student learning that attempt to nurture a deep approach to study need to provide assessment activities that reward a deep approach.

The teacher had talked about the team, the students and feedback from employers. When asked about his own opinions he said he was sceptical at first, and talked of the safety and security provided by the traditional method of 'one way teaching'.

M One way teaching what do you mean by that?
A One way is, one way verbal communication no feedback you know, this is how it is. This is how you are going to do something and this is all you are going to do.

As with a number of the other case studies I have been surprised by the description of practice prior to this action research. The teacher's scepticism changed as the innovation was reported and observed to be improving the student learning. The improved dialogue, feedback, reflection and level of communication had improved the relationships between students and between students and staff. Teachers were reported to be less likely to blame the students and take greater responsibility for the learning process.

Table 8.8. A Comparison of ASQ Mean Scores on a 5 point Likert Scale 0-4

For Case Five (N=21)

<table>
<thead>
<tr>
<th></th>
<th>Meaning Orientation</th>
<th>Reproducing Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Richardson (1990:159)</td>
<td>43.39</td>
<td>34.23</td>
</tr>
<tr>
<td>Gibbs (1992:204)</td>
<td>38.16*</td>
<td>36.00*</td>
</tr>
<tr>
<td>Case Five</td>
<td>50.43</td>
<td>40.00</td>
</tr>
</tbody>
</table>

The teacher used the ASQ with the students. Only the first twenty-one of these was ever received for data analysis. Although a small sample the result clearly suggests the students scored higher on the scale for a meaning orientation when compared to the score for the reproducing orientation. For
the teacher the ASQ provided further evidence that the students were leaving the course ready for employment. However, there are no figures to compare the students' score prior to the innovation or with groups of students who had not participated in the innovation. The most that can be said about these results is that they do not contradict the assessment offered by the teacher.

Student opinion was also canvassed in course evaluations. Once again the students were very positive about the action research element of their training and compared it favourably to other training they had recently experienced.

M Are there any other results that have come out?

A Mmm, I am just trying to think, we have had lots of positive feedback from managers. Like I say when they have carried out functions and exercises. The students complete a course critique and always put down that this field phase was the best, that they enjoyed it the most. They are writing down now that it is significantly superior training to what they receive at the other stages (of training).

During the interview the action researcher went on to defend the other stages of training and suggest that reflective learning would not be appropriate to meet all training needs. Having considered some arguments for non reflective learning, and contradicted his own examples, he concluded this defence by suggesting that perhaps reflective learning could be used further in other elements of training after all. He concluded:

I don't know, in day to day life they are able to make comparisons between most tasks, most experiences. So I think it (reflective learning) could be used further. But certainly their feedback (the students) at the moment is that they are finishing the four week course and the two week course, very positive about the standards they have reached. Which is good, it is not just the standard of instruction but the standard they (students) have been able to achieve.

The teacher's overall conclusions were positive and he had no doubts that he would continue to use the method adopted in the action research. The teacher acknowledged a disadvantage in that more was demanded of teachers during the practical lessons. Teaching staff were encouraged to take a more Socratic approach during exercise and encourage students to
respond to a wider range of scenarios. This enabled the team to more clearly identify and support student learning needs, the teachers appeared to take more responsibility for supporting the learning.

Another key theme is the tension created between the reflective learning goals of the teacher and the narrowly defined training objectives that simply test recall rather than understanding. The teacher felt the students were achieving a much higher level than required by the assessment objectives, but they were gaining no formal credit for the additional learning. There is a risk here of the students being encouraged to adopt a deep approach to study by the teachers while being assessed on training objectives that test their ability to demonstrate a surface orientation to study.

An important contextual issue was revealed in conversation after the recording of the interview had finished. Following the project students progressed from this course to other courses in the establishment, where they now had higher expectations of the teachers. Pressure was put on teachers in other departments to change their teaching methods which was proving quite threatening to colleagues in other departments. The teacher reported difficulties at work with people in other departments being very critical of his methods, although his manager recognised the value and positive outcomes of the project. The difficulties encountered by the action researcher reflect another characteristic of late-modernity, the unintended consequences of action. The problems experienced by the teacher here were not with the teaching and learning, but the response of colleagues in other departments who were challenged by change.

When asked what improvements he would make to the innovation the most serious challenge was to complete in the allocated time. The changes were said to put more pressure on the teaching team to complete the objectives on time; these objectives were considered a problem, but not one that could be changed. The teacher argued that as a consequence of the action research he had most of the ingredients for future success already in place.
fortunately I am able to argue the case for what I have done now, commitment from the instructors is built and everybody wins students instructors the establishment ... To improve it, time, making full use of it and not wasting any (laughs).

In relation to the theories of reflective learning presented the researcher argued that the Jarvis (1987) model offered an improvement on Kolb; it was preferred because it made sense of his teaching experience and enabled a number of routes to effective learning and explicitly provided for the learning of vocational skills.

... The Jarvis one. What I have found there, because it does allow you so many different ways to adapt your teaching methods of a practical subject, I mean this (Jarvis) practical teaching wise is definitely my most favoured. Because it does allow you to do something and gives reasons for doing it that way. Especially as you can change it to the student learning group as well ...

The Jarvis (1987) model not only corresponds with the teacher's experience it provided a language to explain and justify the teacher's actions, 'to give reasons for doing it that way'. In this respect the use of secondary experience the theories of others has helped the practitioner to make sense of their experience and empowered them to demonstrate an understanding of why their teaching methods are justified. This is not a banking concept of education, where the teacher is being directed by other knowledge forms. It is learning from the secondary experience others, engaging adapting and entering dialogue through theory. Secondary experience is being judged and tested in primary experience through a process of action research. The teacher's original scepticism was only softened in the light of a positive experience of using the model in practice.

**Case Study Six**

Case six took place in a college environment with students on vocational health courses during the academic year of 1996-97. The action research was conducted with two groups of students. The first group consisted of sixteen year olds studying their first year of an NVQ Level Two. The second group consisted of mature students who were qualified nurses on a
'Returning to Nursing' course that gained these students thirty University Level Two Credit Accumulation and Transfer points (CATs). It was the second group that I had discussed with the teacher as action research prior to the interview. It was during the interview that I became aware that the innovation had been extended to the younger students. The teacher was an experienced teacher, studying for a post graduate award, and knowledgeable about theories of reflective learning.

At the end of the interview, suspecting it had not worked as well as expected, I asked the teacher how she found being recorded during the interview, the teacher described the recording process as:

P  Horrible. No, no I don't like all the machinery, don't like the sound of my voice. ... It put me off, a little.

The interview was the shortest recorded, approximately half an hour, and therefore less data were available for analysis. As with all the other interviews every effort was made to put the interviewee at ease and make the recording equipment as unobtrusive as possible; only in this case it did not work.

With the group of younger students, who had no experience of providing health care, the teacher introduced practical exercises that provided experience on which the students could reflect. The pattern for the lesson consisted of a short input of theory, followed by practical activities and time for reflection through group discussion.

P  The first group, I was very pro-active, because of the type of activity I wanted them to do. They were going into health care. They had no concept of what it was like – basic nursing. That is what we are looking at here.

The teacher then went on to provide an example of the type of learning activity used.

P  ... and invading personal space so the activity was basically to get them to invade each others space and then discuss how they felt afterwards – and I was involved in that trying to lead but not impose, yeah. So getting them to think about what they had done and what they
felt and then transfer that to how they think a patient might feel. Yeah. It worked really well.

With the second groups of mature students the course, prior to the project, was described as being very didactic. There were frequent references to a 'stand and deliver' style of teaching and lecturing.

M And the post registration group? (qualified nurses)

P Post registration. Completely different, the whole programme was delivered in a different way. It wasn't very proactive. It was very much more stand and deliver, very lecture type.

The main innovation appears to have been greater use of the student experience and more time structured into lessons to discuss theory in relation to the students' own experience. The teacher had changed the teaching emphasis from transmission of information to greater consideration of learning and the utilisation of more student-centred teaching methods. It was the model of reflective learning and the action research that prompted this change. The changes with the mature group were described as follows:

P So short course – 12 weeks – and by week three I had included half hour each morning for them to reflect on what they had done discuss it and evolve ideas from that.

M So you changed the whole course?

P Yes. And I 'am now designing the next round, the next cohort, and I'm going to readjust the timetable.

Over the weeks the half hour discussion element was successful and developed into an hour. The second feature of the innovation was the use of reflective diaries by the students which was intended to be used as a vehicle for the students to record their learning and connect theory to their own experience. These changes, although quite minor, appear to have challenged the experience and expectations of both teacher and students. The interview suggests both teacher and students were used to didactic or transmission modes of education. Whether or not the innovations can be termed reflective learning, it is clear that the introduction of the model certainly prompted more interactive and student centred teaching.
The teacher used the ASQ and her own evaluation sheets to evaluate the project. The mature group of students, returning to nursing, completed the ASQ a higher score for a meaning orientation to study was recorded than for a reproducing orientation (Table 8.9). The scores are similar to those in the other case studies and provide only limited support for the assertion that reflective learning produces a meaning orientation to study; no comparative data from similar groups was provided. The ASQ scores support the observations presented by the teacher during the interview and thereby provide a small degree of triangulation.

### Table 8.9 A Comparison of ASQ Mean Scores on a 5 point Likert Scale 0-4

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</tr>
<tr>
<td>Case Six</td>
<td>45.7</td>
<td>39.5</td>
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</table>

The teacher reported that the students experienced difficulty, at first, with moving towards a more reflective approach to their studies. The words 'very difficult' recurred throughout the description of the initial stage of the action research. The reflective diary was a particular area of difficulty, but as the course progressed the writing of the reflective diary was reported to have improved.

I did go through the diaries with them, whereas at the beginning they found it very difficult because they had not done anything like that before. They did not know what to put down. But as the twelve weeks went on they were writing more about what they were thinking, and reflecting more on what they were doing. So that worked quite well.

The improvement in the writing paralleled the success of the discursive element of the lesson. These two innovations appeared to be symbiotic.
The above quote was directly followed by reference to the discussions in the lessons.

P ... they were talking about what they had done, thinking about it and helping each other in taking that forward into how they would - how they learnt from it and what they would do the next time it comes up in the workplace.

The students' had therefore moved from accepting a passive role to actively engaging with each other as a means of reflection and learning. They used discussion about their own and each others experience to identify what they could learn and to plan a future course of action. Later in the interview the teacher commented that it was explicitly connecting the classroom activity with the personal reflective diaries that enabled the students to understand the role of the diaries.

P The discussions, I could not get a word in edgeways, and what I was trying to get them to do - (pause) – OK, we talked about this, we had thought about it, now apply it to what you are doing in your own diary. Once they realised that they coped a lot better on the whole.

There was a recognition by the teacher that a skilled practitioner can use student experience as a means of delivering theoretical aspects of the course. The movement away from didactic or transmission modes of delivery was a key outcome of this application of reflective learning.

P I think building in the reflective time from half an hour to one hour I had not planned for, but I realised they were getting more out of that session than they were from standing and delivery. So in the end I was picking up on something and using that as a way into delivering some form of information.

M You let it develop because ...

P It began to tie in it began to make me think about the models, and it was student led.

The teacher summed up the teaching changes with reference to interactive modes of working rather than reflective learning, a point that tends to support my earlier comment that perhaps models of reflective learning had prompted more student centred learning in a context where transmission or didactic teaching methods were the norm.
the practical and the interactive one (teaching method) is much more fun and I think you get more out of it; with the young ones. The mature ones are much more reserved, much more use to being taught, “I’m sitting here at a desk – teach me”. They are not use to interactive modes. So that was hard getting them doing exercises, working in groups, working interactively.

The advantages and disadvantages of reflective learning as seen by this teacher record the pressure on the teacher to deliver content and acknowledge the benefits of collaborative experience as a source of learning and reflection.

M Can you think of pros and cons of reflective learning?

P I think it is quite difficult to build in when you; on a short programme when you’ve got so much pre-determined information you have to get across, when you are constrained by outside forces. So I think it is quite difficult. But I think the advantage is that everybody learns from everybody else it makes people start to think about what they are doing instead of just sitting there taking it in and walking away. So you are, looking at the cycle, not just going straight across the top. They are actually coming through it. Yes.

The teacher was certain she would continue with the changes in the future and was thinking about improvements. In relation to the models of reflective learning, both the Kolb and the Jarvis model were considered favourably. Jarvis’ model was the one that had influenced the innovation; it was placed in first in the order of preference (with Kolb second and Usher and Bryant third). The teacher was easily able to identify the pathways used to structure her action research innovation these were consistent with the pathways identified in Jarvis (1987) for contemplation and reflective skills learning. It was a theoretical understanding of the model that prompted the teacher to think about her own teaching and improve student learning.

M Which route did you take?

P Come in at one; one, two three, and I think to begin with some of them were going straight out at four. After that where does it go – I think we went three to seven

M Did it have a practical element?
P It did come in, a bit later, so one, two, three, seven eight but also one, two three and five. It depends on your interpretation of experience. If that includes experience in the classroom. So eventually we were one to five and then seven to eight almost together. And then they would go round again almost on a weekly basis.

The teacher's evaluation in this case was heavily reliant on teachers interpretation and observations. Unlike the other interviews there was little reference to other sources of evaluation data such as assessment results, feedback from students or even the ASQ which was used with one of the groups. Beyond the use and interpretation of Jarvis' model of reflective learning there was minimal influence of the facilitative framework.

The interview responses suggest that the process provided a source of continuing professional development for the teacher; it clearly made the teacher more reflective about her practice. Perhaps this is one of the key findings of these case studies in action research; that it is an effective vehicle for staff development with in-service teachers and trainers. The reflexive references to their own practice and development as a teacher was a theme within all the case studies. The interviews at times felt like a form of mentoring or supervision, a reflective learning process in themselves. All the teachers in the case studies had at some time been taught by myself, which perhaps this prompted the reflexive feedback from the teachers. The transcripts demonstrate teachers were also very open and self critical, there was no attempt to hide their scepticism, reservations or criticisms about the action research. A benefit of an established relationship and basis of trust may also be that it improves the validity of the interview data.
Part Three Reflections and Conclusion

Chapter Nine: Reflections on Case Studies in Action Research

The last chapter provided an intrinsic exploration of each case study. The second level of analysis requires the analysis and interpretation of emergent and cross case themes, what Stake refers to as the "collective case study" (1998:89). Teachers as action researchers were provided with a facilitative framework to assist their individual inquiry and enable an element of cross case analysis. In practice each action researcher mixed and matched the evaluation tools to their particular context. The use and adaptation of the framework was expected and encouraged, it did however make cross case analysis more complicated. All cases shared the general research aim:

- To improve student learning by using models of reflective learning in post compulsory education.

Common themes between the cases are now examined, in eight sections, alongside issues that may have implications for theory, practice and future research.

1. The methods that teachers use to make learning more reflective

The case studies were all within a post school vocational context including work-based training and further and higher education colleges. The academic level of the cases reflects the borderlands between Further and Higher Education and could be described in terms of the National Qualifications Framework as levels II to IV. These vocational courses in the UK all had fairly prescriptive content objectives or performance criteria. Students on all courses were expected to learn elements of prescribed theory and practice. In Jarvis' (1995) terms they need to reflect upon both primary and secondary experience. A key innovation was the way in which each case encouraged students to engage with theory and the knowledge claims
of each subject. Warner Weil argued that “In academic worlds, there is this hierarchy of theory over practice and I see experiential learning as a way of breaking that down” (1989:127). This hierarchy is clearly evident in the vocational education and training discussed above. The persistence and level of dominance of didactic forms of teaching and learning was a surprising finding. The action research produced successful challenges and, perhaps, examples of reflective or experiential learning breaking down the theory to practice hierarchy. In all the cases the participants were encouraged to engage critically with theory and test it in practice, rather than simply replacing the privileging of theory with the privileging of practice. The approach was consistent with that advocated by Usher and Bryant (1997:138). Formal theory was utilised as a tool for practical problem solving, used as a basis to reflect upon practice in a symbiotic way. Theory and practice together inform judgement, interpretation, and understanding, enabling individuals to make more knowledgeable decisions that guide their actions.

A number of the case studies could be said to have encouraged students to develop what Jarvis refers to as “practitioners’ practical knowledge” (1999:133). Students often started with practice situations or simulated practice situations; the practitioners:

1. Enter a work situation (practice situation 1) and practice.
2. Reflect on the practice.
3. Incorporate into their reflection any professional updating or reading they have undertaken – that is, any metatheory to which they have been exposed.
4. Learn and develop their own personal theory, which they test in practice situation 2 (Jarvis 1999:133).

The practitioners perhaps moved more freely between the stages, in a less linear pattern, than the above stages suggest. As Jarvis notes by not privileging theory or practice, where disjuncture occurs between theory and
practice an opportunity for learning and pragmatic knowledge develops. The cases successfully encouraged critical engagement with theory even where this enabled students to operate at a level beyond the requirements of the narrowly defined course objectives. By nurturing a more reflexive engagement between the knowledge claims of a subject and the practice experience of the learners it is possible to provide a more reflexive form of education and training that provides closer correspondence with the needs of the learner and their practice context. The innovations used in the case studies in action research therefore included:

- Students were encouraged to engage critically with theory and test it in practice. There was active engagement with theory rather than passive acceptance.

- Theory and practice together were used to inform judgement, interpretation, and understanding, enabling individuals to make more knowledgeable decisions relevant to their vocational practice.

- Reflection enabled students to connect theory and practice in multiple and less hierarchical ways, neither privileging theory over practice or practice over theory.

- The use of open dialogue between peers and with teachers, facilitated by much greater use of question and answer by teachers.

- Students were given more autonomy and control over their learning.

- Students were encouraged to work through of the possible consequences of their actions, a process recommended by John Dewey. Teachers facilitated this process by using case studies and 'what if' scenarios.

These are all processes advocated for academics by Jarvis in the "Practitioner Researcher" (1999:174). Interestingly, though, most of the case studies successfully used these processes in a context associated with Further Education on courses approximating to NVQ levels II and IV. Yet
these methods are also similar to those processes identified by Barnett as an “Idea of Higher Education" (Barnett 1990).

An educational process can be termed higher education when the student is carried on to levels of reasoning which make possible critical reflections on his or her experiences, whether consisting of prepositional knowledge or knowledge through action. ... Simply, ‘higher education' resides in the higher-order states of mind.(Barnett 1990:202)

Barnett’s conception of higher education is not bound by institutional demarcation. He clearly argued ‘higher education has an independence of any institutional form it may take.' (1990:202). The definition also explicitly acknowledges that higher education can occur in a variety of institutions or be associated with no institution at all, though it could be argued that if education is defined as institutionalised learning, then perhaps ‘higher learning' rather than ‘higher education' is a better term for the non-institutional form. Barnett provided a useful index of six minimum conditions that constitute the processes of higher education. These should promote:

1. A deep understanding, by the student of some knowledge claims.

2. A radical critique, by the same student, of those knowledge claims.

3. A developing competence to conduct that critique in the company of others.

4. The student’s involvement in determining the shape of that critique (i.e. some form of independent inquiry).

5. The student’s self reflection, with the student developing the capacity critically to evaluate his or her own achievements, knowledge claims and performance.

6. The opportunity for the student to engage in that inquiry in the process of open dialogue and co-operation (freed from unnecessary direction). (Barnett 1990:203)
The reflective education tradition of Dewey (1916), Freire (1974), Kolb (1984) all share process values advocated by Barnett of critique, self-reflection, self determination and open dialogue, although perhaps some of these authors put less emphasis on knowledge claims. However, learning from others or secondary experience, was a key dimension of reflective learning in Jarvis (1992). In his account there are similar processes to those identified by Barnett, but these were not defined specifically as appropriate to a 'higher education'. Indeed Jarvis (1992) also extended the processes to skills training and the practical knowledge that is more characteristic of further education in the UK. The case studies presented here provide evidence that supports Jarvis' position. 'Higher learning' processes were applied successfully in a vocational context approximating to NVQ level II and IV; they are relevant to education and training not associated with Higher Education. Are these important and potentially emancipatory processes, exclusive to an idea of higher education? Could they represent a broader idea of general education, a more reflexive education that consciously attempts to encourage learners to learn in a more reflective manner? The evidence presented here suggests that Barnett's processes for higher education offer an alternative pathway that could be applied more broadly across educational boundaries such as the Further and Higher Education divide. It is an approach that avoids traditional bias towards the teaching of received wisdom and provides an alternative to a relativism that can emerge from some forms of experiential learning.

The case study methods can also be compared to other accounts of experiential learning. Henry (1989) provides a number of categories of activities that represent experiential learning, which she locates within a Kolb (1984) framework of reflection on experience. Activities identified by Henry (1989) for experiential learning evident in these case studies include:

- Independent learning; where students are given greater control over the learning process.
• Personal development; that is focused on effective learning and promoted through talk, narrative and discussion.

• Social change; where students from diverse backgrounds use dialogue and discussion to develop understanding of issues.

• Learning by doing: which includes project and activity based learning and the case study approach. "Activity based learning includes practicals, simulations, games, role plays or expressive approaches ..." (Henry 1989:32).

• Problem solving; starting with a problem exploring solutions selecting implementing and evaluating a solution.

   (Henry 1989:30-33)

It is possible to try and locate these arenas of activity within different experiential learning traditions. There is a correspondence between Henry's (1989) headings and the villages identified in the same text by Warner Weil and McGill (1989). I prefer to view the activities as pools of activity that can flow into each other and enrich a learning experience. Case two for example started with individuals selecting a problem for study; they created a narrative that they in turn presented to others. Each discussion group was made up of members from diverse backgrounds. The case was then researched and a report produced for the peer group. On consideration of each report the groups reached a collective decision on a solution to a stated problem. It represented an approach consistent with Jarvis (1987) and the broad themes of reflective learning identified in the fourth chapter, rather than being locked within the boundaries in "villages of experiential learning" (Weil and Mc Gill 1989:4).

In Chapter Three I suggested that the theory to practice hierarchy represented a form of linear learning that did not necessarily reflect how individuals learn in practice. Jarvis (1987) provided a similar critique of Kolb. Hanson (1996) also argued that all embracing 'normative' theories of learning
are themselves a barrier to the development of educational approaches that recognised and respond to diversity. Hanson’s response to the andragogy debate has relevance to models of learning. She argued that rather than construct artificial divisions between the learning of adults and children, what is needed is an understanding of ‘the differing strategies necessary to enable diverse adults to learn different things in different settings in different ways’ (Hanson 1996:107). Flexible models of reflective learning provide a recognition of the complexity, and variety of possible learning pathways, non linear pathways where learners move freely between theory, experience and reflection.

In one sense each case study provided a planned and ‘normative’ learning experience, a learning sequence prepared by the teacher. From the interviews it is clear that in practice the action researcher encouraged students to move between reflection, theory and practice more freely. They did so through a more Socratic facilitative approach in their teaching. They “became facilitators of learning in the practice situation, rather than didactic teachers providing information to be learned” (Jarvis 1997:173). However, a key dimension of the case studies is the continued presence and importance of the vocational subjects’ knowledge base. The teachers were not simply facilitators of primary experience, but actively enabling students to relate practice to theory and theory to practice. Other abilities encouraged in higher education (Jarvis 1997:174-175) were being nurtured in these case studies of vocational education and training. These included concerns:

About the ability of practitioners to cope with reasoned and critical argument.

That practitioners learn how to learn in a reflective manner.

That students seek a better understanding of reality than they had before.

That practitioners who study them have a good knowledge of some aspects of metatheory and can use it to situate their practice in the wider world.

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That the practitioners-researchers they develop become competent researchers (Jarvis 1999:174).

All the above concerns are evident in the case studies, with regard to the last point it was the teachers rather than their students who developed as practitioner-researchers. However, the projects developed students’ as well as the teachers’ research skills.

The point of practice where the case studies differed was the degree to which each case study introduced an innovation. Student autonomy and control of their learning generally increased. However, the level of student autonomy and control varied according to the teaching and learning context. Learning by doing and some form of practical activity was central to each case study, though practice in all of them was, to varying degrees, simulated rather than purely work based. The case studies were all vocational but involved courses at different levels.

2. The outcomes of reflective learning as reported by practitioners.

The facilitative framework that was provided to action researchers encouraged them to collect data that would allow direct comparisons between their action research on reflective learning and prior experience. Their evaluations were reported in the interview. In accordance with an ethos of participatory action research, each researcher was encouraged to use and adapt the facilitative framework to their particular context. In striving towards a more collaborative and participative approach to research it is difficult to obtain standardised data flows that facilitate cross case analysis. As the discussion on assessment will demonstrate, the subjective judgements that underpin even ‘rigorous’ assessment suggest that caution is needed when comparing assessment results that are, in effect, different constructions and interpretations of educational phenomena. Cross case analysis requires care in teasing out common themes and reaching conclusions.
3. Students’ assessment results:

The teachers reported very positive results in terms of the standards of students’ work and in this respect believed the action research to be a success. Precise figures were not always provided and their commentary on the exams and course work grades reveal a complex picture. There are clearly disadvantages in introducing innovations without changing the assessment process, something that was generally beyond their power to alter. The assessment outcomes of the cases are summarised below.

- Case one reported differences between the reflective and non-reflective groups that were so dramatic it would seem unlikely the innovation alone accounted for the higher level of performance. It was the second year that the action researcher had tried the innovation and achieved improved exam and coursework grades.

- Case two reported a high standard of work with ‘one or two exceptions’ and all participants were judged as competent; only one student out of 35 had to resubmit his work for assessment. The action research method had been refined over several years, making direct comparisons between groups in case two groups difficult.

- Case three the teacher reported that formative assessment results declined in the early stages, then improved to a higher standard than previous groups. The students’ summative assessment was not completed before the end of the action research cycle.

- Case four results were said to have been lower than expected, but there was no direct comparison made, except with another group where the innovation was tried and where the results were said to be excellent.

- Case five differences in average exam mark were found not to be significant. Reports from the trainees work-place managers suggested that the action research had improved the level of competence of the trainees.
Case six did not provide evidence related to assessment.

In the professional judgement of the teachers the changes improved the student learning and assessment outcomes. The teacher evaluations are clearly imprecise and more direct comparisons of statistics, as in case five, would have been desirable. However, such figures would not reveal the complexity and hazards of using assessment scores alone to evaluate the innovations. From the interviews a much more complex assessment picture emerged, one that suggests those raw assessment scores should be viewed with scepticism. As noted above, it does seem unlikely that the comparative assessment results in case one can be solely attributed to the action research. In case two the summative assessment options of competent or not yet competent make it difficult to note any gradations of change to the level of achievement, this is particularly true when a high percentage of students are judged as competent each year. The teacher reported that the innovation had inadvertently changed the way teachers marked work. They were now looking for evidence of a deep approach to learning before awarding higher grades. This unintended consequence of the innovation makes direct comparisons between raw assessment scores meaningless. In case four where the results were 'disappointing', the group appears to have been given an assignment related to an unfamiliar context very late in their module and one designed for a higher level course. In such circumstances it is not surprising the results were 'disappointing'. In case five, for reasons beyond the control of the action researcher, the assessment continued to assess recall and learning associated with a surface approach to study. If the students had adopted a more reflective and deep approach to study, as evident from other data sources, this would not have been rewarded in the final assessment.

In case three the interviews revealed that even assessment scores are prone to subjective judgements and are liable to be altered by the process of investigation itself. Such subjectivity is anathema to assessment practice but as Jarvis notes "The more sophisticated the interpretation, or meaning, given to the work, the more subjective is the assessment because the assessors
are endeavouring to understand a problematic phenomenon from their own perception understanding and knowledge." (1997:145). As the researchers reflexively implemented more reflective methods of learning, their own understanding and knowledge was being changed in the process. With such processes occurring even assessment scores as research data need to be treated with caution and evaluated in conjunction with other sources of information.

Graham Gibbs (1992) argued that some assessment systems reward a surface approach to learning. As was the case reported in case five; where the assessment did not appear to reward students who adopted a more reflective and deep approach to learning. Gibbs (1992) strongly recommends that innovations aimed at producing a deep approach to learning should change the assessment. He points out that this is a powerful lever in changing student behaviour. Changing the training objectives was beyond the control of the teacher in case five. The teacher was convinced the innovation has produced safer, more competent students and he was getting feedback from managers and other members of his team to support that evaluation. However, any improvement in student learning was not represented in the exam results. The experience has parallels with the conclusions reached by Gibbs "changes in assessment usually lag behind innovations in teaching but it can be very effective to lead with innovations in assessment and then exploit the teaching opportunities this throws up" (1992:173). In a Fordist education and training context, this may be difficult to achieve because assessment is increasingly centralised and precisely prescribed.

4. Student Course Experience

During the interviews the teachers commented on student course evaluations and critiques. With the exception of case two, these were only reported in the interview but not available for further analysis. Most of the cases used their organisation's instrument for collecting information on students' perception of their course. Two had used Nominal Group Technique (NGT),
recommended in the facilitative framework as a means of gathering data. There was an unexpected use of Nominal Group Technique in case four. Through NGT the classes had a role in planning the innovation and developed a process similar to that originally planned by the teacher. Student involvement in the innovation produced success in the action research. It may well have been this empowerment, rather than the innovation itself, which led to improvements in learning.

Empowerment and control in education was discussed in the third chapter and I have argued (Dyke 1996) that education is characterised by ambivalence; it provides both at the same time. These macro issues were played out in the micro conditions of this action research. However, teachers implemented changes to the teaching and learning generally without consulting the students, but students later gained a more active role as a result of the research. This increased autonomy and freedom that students experienced was a key theme in the feedback from learners. The use of group work and discursive teaching methods provided more space for the students' voice, which in some cases altered the course of the research. Wildemeersch reports a similar process:

> The dialogue about the learner's experience in educational processes legitimizes these experiences and gives an active voice and presence to the one who express them. (Wildemeersch 1989:66).

To some extent, perhaps by default rather than design, the students did collaborate and participate in the action research. In case four where the teacher attempted to impose the innovation without winning student cooperation she met resistance and only progressed when they were included in the planning process.

All the case studies aimed to structure reflection into learning. A means by which the case studies facilitated reflection and transformed experience into learning was dialogue. The cases avoided the pitfalls of some individualised
learning methods. For Wildermeersch there are considerable risks involved in following individualised learning pathways.

By doing so we may lose that central dimension of learning - conversation or dialogue – by which we understand and transform the reality in which we live (Wildermeersch 1989:60).

Dialogue student to student, student to teacher was central to each of the innovations and this placed a greater sense of worth and value on the students' experience. The dialogue was usually promoted by more Socratic teaching on the part of the teachers, who posed different scenarios and possible consequences to prompt students' thinking. It enabled students to interpret phenomena and make more knowledgeable decisions.

In case one, the students were so actively involved in their group problem-solving practical they were reluctant to leave the workshops at the end of a lesson. In case two it was the opportunity to engage in dialogue with others from different teaching environments which was frequently cited as a positive outcome of the process and one which the students enjoyed. In this instance students used words such as 'enlightenment' to describe their experience of the action research. In the third case it was the increased ability of students to demonstrate understanding, to articulate and elaborate upon their answers that most impressed the teacher. The action research in case four was only successful once the teacher included the students in discussion about the process. In case five the use of an open forum for debriefing provided a form of three hundred and sixty-degree appraisal of the learning experience.

The critical importance of dialogue to the success of the teaching and learning reported in these case studies provides examples of praxis; theory orientated towards action and applied in practice. As indicated above, Freire's account of education places substantial emphasis on dialogue:

Without dialogue there is no communication, and without communication there can be no true education. (Freire 1972:65)
The use of dialogue corresponds with contextual theory in earlier chapters; it is evident in educational theory and the social theory of Jurgen Habermas (1970); who argued that communicative rationality is essentially interactive and based on the ability of people to present or question each other's arguments. According to Wildemeersch (1989) communicative rationality provides a basis for interpretation and understanding whereas strategic rationality is goal directed "governed by the capacity of people to develop and apply means-to-end schemes, in order to achieve predetermined goals." (Wildemeersch 1989:66).

Greater use of dialogue was an important element in the student experience of the case studies in action research; facilitating reflection on experience is also a theme that is legitimised in the social and educational theory discussed in part one of the thesis. All the case studies provided greater emphasis on dialogue as a means of successfully improving student learning, which was a key aspect of the praxis provided in the case studies. The use of dialogue is a thread, perhaps used in different patterns, that can be said to correspond with the theory espoused in part one, theory enacted by teachers and theory as experienced by students in these cases.

5. Teacher experience

The primary source of data used to evaluate the case studies in action research was gained through an interview with the teachers. In a sense, all the data discussed reflects their interpretation and understanding of their experience. At times, the conclusions are supported by further validation in the form of other sources provided by the teachers such as student feedback or test results; on the whole this information is simply referred to in interview rather than provided as raw data. Where not volunteered, I felt requesting other data to verify the account given during the interview would suggest a lack of trust; the interviews provide an open, honest and authentic account of practitioner experience, one that gets close to the reality of the action research. The participants were self-critical and disclosed information that could potentially risk exposure to criticism by others or simply some
embarrassment; they clearly did not use the interview to present themselves and their practice in the best possible light. The open and frank discussion provided in the interview raised ethical issues for as Stake argued “The value of the best research is not likely to outweigh the injury to the person exposed.” (Stake 1998:103). I have, therefore avoided identifying the participants.

Without exception all the teachers were convinced that the changes had improved student learning. One who was particularly sceptical and taught a ‘control’ group traditionally, planned to adopt the innovation with his classes in the following year. Indeed all the participants planned to continue using the reflective learning methods in future teaching. When asked to summarise the outcome, a typical response from the teachers was the simple and pragmatic criterion “it works”. Teachers pointed towards improved standards of students’ work (case one and two). Two cases (three and five) suggested that the students’ problem solving skills had noticeably improved. Teachers believed that as a result of the reflective learning the students were better equipped to “meet the challenges of life and work” (case three). Case five reported a dramatic improvement in the students’ safety record and feedback from workplace managers.

When asked how they would improve the action research innovation in the future the theme of student involvement emerged in four of the case studies. When introducing students to a new and unfamiliar method of learning the teachers found they needed more time to explain the learning process. They noted that they had most success when they allowed the students to become involved in the planning and implementation of the teaching and learning. This was perhaps most dramatic in case three where NGT was used to plan the innovation with the class. It was also stressed in case one in terms of the need to “get them on my side”. Strengths recognised in cases two and four were that students had more control over what they studied. Student involvement and participation in the process would not only meet the collaborative aims of the research - in these case studies it was judged to improve the quality of learning.
Another common thread in the case studies reported by the action researchers is that the students enjoyed the teaching and learning innovations. Each of these case studies placed additional demands on the students; they had to be actively involved in their learning, they were expected to problem solve, work with others, to think and be creative. Which was clearly in stark contrast to the passive learning and didacticism they were use to. Despite the demands and hard work they responded positively; all accounts of the students’ perception reported that they had enjoyed the learning process.

6. Approaches to Study Questionnaire

The ASQ was originally developed as part of the facilitative framework to provide comparative data on the impact of the innovation on student learning. It was hoped that the teacher would use it before and after the innovation in order to quantify the possible impact of the action research. In practice most of the teachers simply used the ASQ with their action research group at the end of the study and compared their results with those in the Approaches to Study literature. In retrospect it may have been naïve to believe that incorporating sufficient controls over variables would enable quantitative analysis, nor was it compatible with the model of participatory action research used in this research. However, the ASQ results may not have provided a powerful torch for inquiry in the form of direct comparative data, but the questionnaire did provide at least some light that illuminated the practitioners’ evaluation.

Given the lack of direct comparative data, with the exception of case one, it is not possible to categorically conclude that reflective learning produced a meaning orientation to study. However, the results gained in the ASQ do provide some limited support for this hypothesis. The scores compare favourably with those in other studies (Richardson 1990, Gibbs 1992), though it should be added that these studies were with undergraduates and used a slightly different construct from the FE ASQ I developed. As predicted the research recorded higher scores for those traits associated with a deep
approach to learning than those associated with a surface approach. The results do not provide evidence that disproves the hypothesis; the ASQ could have revealed higher scores for a surface approach than a deep approach to study. When bench marked against similar studies with undergraduates the results might have suggested a reproducing rather than meaning orientation; but they did not. The results of the ASQ are summarised in Table 9.1.

Table 9.1 A Comparison of FEASQ Mean Scores on a 5 point Likert Scale 0-4

Comparative results for all Case Studies in Action Research.

<table>
<thead>
<tr>
<th></th>
<th>Meaning Orientation</th>
<th>Reproducing Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Richardson (1990:159)</td>
<td>43.39</td>
<td>34.23</td>
</tr>
<tr>
<td>(N=99)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gibbs (1992:204)</td>
<td>38.16*</td>
<td>36.0*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case One</td>
<td>(N=15)</td>
<td>46.50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>36.80</td>
</tr>
<tr>
<td>Case Two</td>
<td>(N=23)</td>
<td>47.52</td>
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<tr>
<td></td>
<td></td>
<td>34.17</td>
</tr>
<tr>
<td>Case Three</td>
<td>(N=12)</td>
<td>45.16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40.50</td>
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<tr>
<td>Case Four</td>
<td>(N=16)</td>
<td>44.43</td>
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<tr>
<td></td>
<td></td>
<td>41.92</td>
</tr>
<tr>
<td>Case Five</td>
<td>(N=21)</td>
<td>50.43</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40.00</td>
</tr>
<tr>
<td>Case Six</td>
<td>(N=10)</td>
<td>45.7</td>
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<tr>
<td></td>
<td></td>
<td>39.5</td>
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<tr>
<td>Case Average</td>
<td>(N=97)</td>
<td>46.62</td>
</tr>
<tr>
<td></td>
<td></td>
<td>38.81</td>
</tr>
</tbody>
</table>

* Gibbs (1992) Scores are adjusted for comparison with 32 question ASQ

The scores for meaning and reproducing orientation to study recorded in the case studies are comparable with those gained with undergraduates. Given that most of these were at vocational, pre-degree level, one might have
expected the study orientations to have been less meaning orientated than
the higher education scores. However, without more comparative data from
within each case it is difficult to reach any firm conclusions; it could be that
the ASQ scores simply do not present very much variation between different
groups of students. That said, the values for the Cronbach coefficient alpha,
used to measure the Approaches to Study Questionnaire reliability, are
entirely comparable with those obtained in other studies.

The results of the ASQ reported in the case studies are consistent with the
other findings from the action research and the views of the teachers. They
do not contradict these alternative sources of data. The tests of reliability
have produced results that are comparable to those achieved by Richardson
(1990). The use of the ASQ in this study supports Richardson’s conclusions.

It provides direct information about the
approaches to learning that are adopted by
students in response to the manner in which
particular courses and curricular programmes are
delivered, and it might therefore constitute a
valuable adjunct to more conventional forms of
student evaluation. In short, one might hope that
the questionnaire described in this paper would
find applications both in the theoretical analysis of
student learning and in the professional
development of teachers in higher education
(Richardson 1990:165).

Consequently the ASQ appears to be a valid and reliable instrument. It
informed the evaluations of practitioners and assisted in the professional
development of teachers. The adapted ASQ has potential as a research tool
for future systematic investigations of teaching and learning where there are
more controls over data and research questions than was appropriate in this
research.

7. Theory experienced.

The teachers were prompted to reflect upon and seek to improve their
practice through the engagement with others, including myself as an action
research participant and the educational literature on reflective learning. This
secondary experience from text was not passively accepted, but reflected upon, adapted and tested in the action researcher’s practice. This ethos can be found at the heart of modernity; as a feature in Enlightenment philosophies and evident in philosophy from Francis Bacon to John Dewey. The ethos of reflection on action and testing of ideas in practice contrasts with didactic or ‘banking’ approaches to education that rest upon deference to received wisdom, an approach that privileges theory over practice. The approach to research has been pragmatic; informed by theory adapted in context with ideas about good practice constructed through praxis. In Guba and Lincoln (Denzin 1994) terms the research paradigm drew upon critical theory and constructivism rather than positivism or post-positivism.

In the interviews, participants openly discussed their initial scepticism and acknowledge that their ideas changed as a consequence of their reflections on the action research experience. They endorsed and confirmed the reflective learning model used to structure the innovations. The use of the Jarvis (1987) model was essentially favoured by practitioners because its use improved student learning; was non-linear and presented a variety of learning pathways that could be adapted to their practice context. No practitioners recommended changing the Jarvis (1987) model, all were critical of the Kolb (1984) model as over-simplified and too linear. The interpretation of Usher’s and Bryant’s ‘Captive Triangle’ (1989) was presented as an alternative model of reflective learning for discussion during the interview. When the action researchers were asked to put each model of reflective learning in order of preference a recurring pattern emerged with the preferred choices being:

2. Usher and Bryant (1989)

Models of reflective learning were not treated as universal laws to be applied with precision, but as adaptive tools, platforms for innovation and practice experimentation. Theory was only accepted in so far as it was judged
relevant and useful to practice. The practice experience in these case studies provides further support to the theorising that can be found in the reflective and experiential learning literature discussed in this thesis. There is a surprising thread of continuity between theory espoused, enacted and experienced. Practitioners applied the model to their context, in a manner that I believe was consistent with the theory espoused. In the judgement of each practitioner, the innovation improved student learning and essentially met the original objective of the action research.

8. Methods

The facilitative framework was designed as a springboard for the action research. It provided the action researchers with a set of tools that they could use as appropriate. The action research methodology was not designed as a template to be imposed on the teachers. Since it would have undermined the participatory nature of the action research. In practical terms it would simply be naïve and arrogant to believe such a template would be passively accepted and used in a standardised way and it would have been contrary to the philosophy of this research project. Teachers mixed and matched their evaluation data both from the facilitative framework and other available sources of information. All the elements of the facilitative framework were used in different case studies, no single case study utilised the framework in its entirety.

Having put so much effort into developing and testing the ASQ as an evaluation instrument it was frustrating that they did not all use it as originally intended. It would have been of more value if it had been used both before and after the innovation. In retrospect, I could have been more persuasive in encouraging teachers to use it comparatively with their own students. I was perhaps over concerned about undermining the participatory ethos of the action research by imposing such a framework, since this would lay the research open to the Carr and Kemmis label of “technical action research” (1986:202) where participants are manipulated by external agency rather than focused on improving their own practice. I am now inclined to view
more active persuasion of action research participants as simply part of the warp and weft of dialogue in participatory action research. Do the outcomes of testing findings of external research and possibly contributing to research literature prevent the test results enabling action researchers to evaluate their own practice? I am not sure that a distinction between action research as either promoting external research literature or improving practice is particularly helpful; it can do both. The participatory nature of the action research is not undermined by participants being persuaded to adopt elements of a framework or by them choosing change, it is the dialogue, engagement and choice that provide for a participatory ethos and practice.

Similarities between the research processes and learning itself were suggested in the methodology chapter. Interviews, however informal and conversational, involve reflection upon experience. This is an essential feature of reflective learning and interviews can represent a learning experience for all participants. Such reflection on experience can transform it into learning and produce changes in the person. A conventional positivist approach to interviewing suggests that the interviewer is simply collecting data, finding out the facts and views of the interviewee: what is important is that the interviewer creates a situation where the respondents answers are reliable and valid.

The idea should be to put the respondent at ease, so that he or she will talk freely and fully. A brief remark about the weather, the family pets, flowers or children will often serve to break the ice. (Selltiz 1976:564)

The idea does not include engaging with the other as a person it is simply about creating the right atmosphere to collect valid and reliable information, data that are presumably there to be collected, there for the taking. That the voice of the interview participants is valid and authentic is clearly important. However, there is another feature within these interviews that reinforces the argument that the interview itself is a reflexive process, part of a learning process.
On reading the responses to questions, participants appear to be making sense of their experience in the interview; they are actively constructing their interpretations and understanding. This might be represented in positivist terms as interviewer bias, but this would suggest that people already know what they think and such understanding is cast in stone. The interview was more than a simple report on experience. It was part of the participants’ reality, reflection and learning. As well as reporting views and opinions already held it also transformed this experience and developed understanding. During the interviews, participants were clearly giving time to reflect, think and analyse their teaching experience, time that would otherwise not have been spent on reflection. The interview was a fairly unique and unusual form of interaction that enabled the participants to develop and construct their understanding of events. They did not simply report predetermined ideas, but also worked them through. Is such data reliable? Some of the views expressed developed as a consequence of being questioned; if questioned again the ideas might change and develop, as a consequence of further reflection. Are these elements of learning occurring in the interview evidence of a Hawthorne effect corrupting the data? I think not; it is evidence of people reflexively engaging with their environment, thinking, adapting and learning as a consequence of their experience. That experience cannot exclude their role as participants in a research process, indeed the conventional interpretation of a Hawthorne effect suggests that social science research can be separated out from the reality it seeks to study. This includes a view of reality that exists to be captured and examined rather than one that is reflexively constructed and reconstructed in the light of people’s everyday experience.

The reflexive nature of the interview was amplified by the relationship between myself and the teachers, all of whom had previously been students of mine on in-service training courses. The nature of our relationship led to the teachers examining their own professional development during the interview. In seeking to make the research a collaborative project between practitioners I had probably underestimated the significance of my
professional role in teacher education. While the reflexive nature of the research as a learning experience fits the theoretical analysis presented in this thesis, it was also in part accounted for by the context in which the research took place. Indeed these case studies point to the potential for using models of reflective learning and action research as a mechanism within teacher education. The interview was a means to collect data from the action research, but it was also a reflexive process for all participants that helped transform experience into learning.

As case studies in action research particular to the context in which they were developed it is not possible to generalise the conclusions presented here to other context. However, some common themes from cross-case analysis have emerged and these are summarised below.

Summary
The case studies successfully applied teaching and learning strategies associated with reflective and experiential learning traditions in a vocational educational and training context. The teaching and learning strategies adopted in a vocational education and training context were similar to those recommended in higher education. The strategies all included greater use of reflection in learning:

- Students were encouraged to engage critically with theory and test it in practice.
- Reflection enabled students to connect theory and practice in multiple and less hierarchical ways.
- There was the use of more open dialogue between peers, and with teachers, facilitated by much greater use of question and answer by teachers.
- Students were given more autonomy and control over their learning.
• Students were encouraged to work through the possible consequences of their actions; teachers facilitated this process by using case studies and ‘what if’ scenarios.

All teachers concluded that the teaching and learning innovations improved student learning by using models of reflective learning. Teachers reported the outcomes of the action research in terms of:

• improved assessment results
• improved student course experience
• more positive teaching experience
• students recording a deep rather than surface approach to study
• students more able to meet challenges and problem solve

The use of individual case studies in participatory action research produced “intrinsic case studies” (Stake 1998:88) which represent their own unique interpretation, adaptation and context. As Jarvis argued “Case studies about practice are, however, basically intrinsic” (1997:81). The case studies reported here demonstrate a tension between conducting participatory research and collecting data that facilitates more instrumental cross-case analysis.
Chapter Ten: Reflections and Conclusions on Theory, Practice and Research

The thesis has constructed a late-modern case for reflective learning in post-compulsory education, it argues that reflective learning connects with a key concept in contemporary social theory - that of reflexivity. The historical, philosophical and sociological context has been provided for reflective learning. The makings and consequences of modernity influenced education as an academic discipline; examples of this literature have been explored. The earlier chapters of the thesis considered theory, later chapters considered praxis through case studies in action research. This final chapter returns to theory, it provides the overall conclusions and tentatively suggests a model of learning for future action. It will seek to summarise and develop the arguments of earlier chapters by returning to the following key questions:

- What are the key characteristics of late-modernity?
- Why reflective learning in post compulsory education corresponds with the needs of late-modernity?
- How can reflective learning provide a form of reflexive education?
- How can reflective learning be adapted: a possible model for reflexive education?

What are the key characteristics of late-modernity?

Many of the themes of the Enlightenment are central to the contemporary critique. The Enlightenment ushered in a form of critical theory of the time; it challenged received wisdom and promoted the testing of ideas against evidence. Through empiricism Hume, Locke and Kant stated the importance of learning from first hand experience. Both Locke and Hume were acutely aware of the limitations of relying on information available to the senses and were, for want of a better word, pragmatic about their endorsement of
empiricism. The connection between the scepticism of David Hume's later work and the concept of reflexivity has also been made in earlier chapters. The Enlightenment was accompanied by an information revolution; perhaps an outcome of the Enlightenment was a confidence and deference to science. Our current information revolution has also seen increased popular demand for science books. However, the suggestion that the Enlightenment provided for an absolute faith and confidence in science (Bauman 1995) was not typical of the Enlightenment philosophers themselves. Even the proselytiser Voltaire cautioned against any kind of system building.

Bauman suggested that the Enlightenment maxim of 'liberty, equality, and fraternity' be replaced by a post-modern "liberty, diversity and tolerance" (Berlharz 2000:111). If one accepts Peter Gay's (1969) or Roy Porter's (2000) analysis of the Enlightenment, these post-modern qualities were those of the eighteenth century. Acceptance and celebration of cultural diversity, even cultural relativism, were the order of the day and reference has been made to Locke, Montesquieu, Voltaire and Diderot to illustrate this point. Gay argued:

As the toleration of diversity seemed an indispensable prerequisite for the effective pursuit of knowledge – it is only open debate, even sprouting of error, that will permit the critical mind to operate and enable men at least to approach an acceptable philosophy of life – it seemed equally indispensable for politics: it uncovered injustices committed by entrenched powers, and as Locke had already argued in his first Letter Concerning Toleration, far from fostering seditious factions it alone makes for social peace. (Gay 1969:400-401).

The word toleration suggests authority, the granting of license or giving permission. The Enlightenment concern was with the pursuit of knowledge and securing political structures. Bauman accepts this argument:

It goes without saying that the problem of justice cannot be as much as posited unless there is already in place a democratic regime of tolerance which guarantees in its constitution and political
practice ‘human rights’ – that is, the right to retain one’s identity and uniqueness without risking persecution. (Bauman 1997:63).

By itself the democratic regime does not promote (let alone guarantee) the transformation of tolerance into solidarity – that is, the recognition of other peoples’ misery and as one’s own responsibility, and the alleviation and eventually the removal of misery as one’s own task. (Bauman 1998:63).

However, there probably is a difference here with Bauman. The word tolerance suggests being unconditionally disposed to accept the opinions and acts of others, a liberal predisposition. Tolerance for Bauman connects with solidarity. He goes even further than the Enlightenment theme of freedom from persecution and takes an ethical position of concern for the other for the others sake. He (1993) connects with another Enlightenment theme, Kant’s categorical imperative. Bauman’s imperative is a "posture guided solely by the Other for the Other’s sake, and respect for the other as a free subject and the end in itself." (Bauman 1993:49).

As we face the potentially catastrophic consequences of risk society, post-modern ethics demand we put the Other, and future Others, before ourselves. The means, Bauman suggests, by which we consider the Other and future generations seem to me to reflect the themes of reflective learning discussed in the fourth chapter. Dewey argued that learning requires taking active control of one’s actions and being aware of the consequences of your actions for others. Bauman argues:

The first duty of any future ethics, says Hans Jonas, must be ‘Visualizing the long range effects of technological enterprise.

The duty to visualise the future impact of action (undertaken or not undertaken) means acting under the pressure of acute uncertainty. (Bauman 1992:221).

He goes on to suggest that such moral action throws the doors wide open to doubt and second thoughts. Beilharz’ interpretation of Post-modern Ethics
also notes that in the end the only hope is: "Humans have a striking capacity to learn...and to posit that if humans learn they can also unlearn." (Beilharz 2000:126). If one is to have concern for the Other one must engage with the Other. The importance of relationship with the Other is a theme that I will return to in discussion of reflexive education.

Scepticism and the categorical imperative may have their late-modern counterparts in reflexivity and post-modern ethics. Other parallels with Enlightenment thinking and contemporary issues can be drawn. In the "Advancement of Learning" (1625), Francis Bacon advocated learning through discovery and scientific method. Bacon’s ideas, although strictly speaking, pre-Enlightenment, found further endorsement in the Enlightenment philosophies. As suggested in chapter four, Dewey (1916) adopts a similar pragmatic approach to education and Jarvis (1987) has experimental learning as a pathway to reflective learning. The willingness to move beyond received wisdom, to think afresh, to be open to new discoveries and ideas has been central to learning since Bacon; Bauman suggests it is to be essential to human engagement with late-modernity.

In relation to learning, the Enlightenment philosophies asserted that we learn from experience. Kant opens the Critique of Pure Reason with words to that effect (Kant 1781) and continues to elaborate on learning from experience to provide an approach that is similar to that found in the contemporary understanding of reflective learning. He argues that in order to gain knowledge from experience we must transform that experience.

For how is it possible that the faculty of knowledge should be awakened into exercise otherwise than by means of objects which effect our senses, and partly of themselves produce representations, partly rouse our powers of understanding into activity, to compare, to connect, or to separate these, and so convert the raw material of our sense impressions into a knowledge of objects which is called experience? (Kant 1781:BI).
As discussed above, Kant answers this question with reference to “The Principles of any transcendental deduction” (Kant 1787:B116) and the concept of synthetic knowledge known a priori. It is clear that for him experience alone did not provide for knowledge; his categories of mental processes enable us to interpret and gain understanding of experience. As Dewey records of Kant “he shattered traditional empiricism by showing that the sensations upon which it depended require thought to get anywhere.” (Dewey 1924:9). There is a strong parallel between Kant’s transcendental deduction and the definition of reflective learning accepted here.

Learning is defined here as the process of transforming experience into knowledge, skills, attitudes, values, feelings etc. (Jarvis 1995:59).

The language used to describe the novelty of our times is polymorphous. The terms post-modern, reflexive modernity, neo-modern and late-modern have all been used to describe the key social theorists that have shaped the perspective here. Beilharz (2000:107) argues that the modernist preoccupation and difficulty with naming is characteristic of what Bauman refers to as ambivalence of modernity. Late-modernity and reflexive modern are terms that have been adopted here to represent a perspective that is located in the various works of Anthony Giddens, Ulrich Beck and Zygmunt Bauman. The game of naming continues; in “Liquid Modernity” Bauman (2000) points to yet another descriptor of contemporary society:

Appearing under the name of late-modern or post-modern, Ulrich Beck’s ‘second modernity’ or as I prefer to call it, the society of fluid modernity’ (Bauman 2000:23).

The second chapter demonstrated how late-modernity has been characterised as a period of rapid and wide-ranging change, a period in which people are forced to reflect on new information and perhaps reassess their taken for granted knowledge and experience of the world. Contemporary society is made up of reflexive people who are forced to
examine each move they make; thought and reflection are now very much
the order of the day. Bauman (2000) accepts the analysis that we are more
"critically predisposed" (2000:23), that people are forced now to think and
reflect. However, unlike Beck, he doubts there is any potential for radicalism
in the contemporary individualised forms of critique. He (2000) suggests we
are merely critical consumers, not critical of the relationships of production,
and such consumer critique is toothless. He uses the analogy of demanding
customers who are quick to demand high quality service, but prefer to vote
with their feet, go somewhere else, rather than struggle for change.

Liquid modernity may be characterised by a shift of focus from production to
consumption; using conventional sociological methods Bauman provides an
excellent account of such a process in his book "Work Consumerism and the
New Poor" (1998). I am not convinced the contemporary modes of critiques
are toothless and lack the potential for radical critique. New radical forms of
political action, as represented by "No Logo: Taking Aim at the Brand Bullies"
(Klein 2000) strike at the heart of corporate identity. The fuel crisis in the UK
(September 2000) may have been representative of Bauman’s individualism
and even ‘forces of conservatism’ - it certainly has not, as yet, produced the
environmental critique of Beck (1992). As an example of protest and
consumerism was the fuel crisis entirely toothless? The UK fuel crisis could
be seen as an example of unforeseen consequences, as characteristic of the
ambivalence of modernity, an example where what is taken for granted is
reflexively undercut and challenged. The speed in which these events
unfolded revealed the rapid pace of change, the fragility, rather than
flexibility, of late-modernity.

There may be no guarantees that reflexivity will produce the type of radical
critique and reflection one hopes for. Ambivalence rather than empowerment
or control dichotomies are the order of the day. Yet as Bauman argued in his
earlier work “Modernity and Ambivalence” (1991) such ambivalence is a
precondition for change; that people are continually forced to reflexively
engage with their world, as it changes shape around them, suggests that
modernity retains the potential for radical critique. It is the very ambivalence

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and loss of certainty that forces a renewed assessment of risks and opportunities. Beilharz supports this interpretation.

Bauman’s concern is that humans are, and ought to be ambivalent, at least sufficiently uncertain to remain open to the world, to both value differing traditions and to remain open to the possibility of change. Human ambivalence is the precondition of social change. (Beilharz 2000:170).

Continuous reassessment of experience, and information as part of experience, has become central to living with the rapid change of late-modernity; it is also part of learning. Earlier forms of modernity might more frequently use custom and tradition to guide action. The shift from Fordist modes of production provides an economic example of this process. Capitalism has adapted to the rapid pace of change by using labour that is more reflective, creative, innovative and autonomous. These skills had become necessary to profit making in high skills sectors of the economy. Lash and Urry argue that the current period is one that depends on “reflexive accumulation” (1994:60), where responding to new and changing knowledge and information are essential to economic growth.

If late-modernity is the ‘fluid’ in which education flows, education will in turn be shaped and influenced by it. Education will need to respond to the demands of liquid modernity and needs of more reflexive students. The central question is what approach to learning is appropriate to late-modernity. How can it enable students to navigate their way through a diverse world that is full of manufactured risks, where there is a lack of certainty and ambivalence; where knowledge is contingent, transient, subject to change and judged as valuable only for as long as it supports action. A task for education is to enable students to make more knowledgeable decisions. Key theorists of contemporary modernity, Beck (1996) and Giddens (1998), have acknowledged the importance of a role for education in enabling individuals to meet the demands of late-modernity. Late-modernity can only be understood in relation to the modern. There are a number of social and philosophical themes that thread their way through Enlightenment and post-
Enlightenment modernity. The rest of the chapter will attempt to weave these themes into an agenda for post compulsory education in late-modernity.

Why reflective learning in post compulsory education corresponds with the needs of late-modernity

As demonstrated in the first part of this thesis, the concept of reflexivity connects with reflectivity in learning. When interviewed, Giddens quite explicitly defined the concept of reflexivity in terms of reflection. In education this “reflexive monitoring of action” is referred to as a “basis for reflective learning” (Jarvis 1992:37). Lash and Urry also refer to the critical reflection of individuals in their account of reflexivity (1994:32). Reflexivity and reflection are therefore at the heart of the theoretical approaches that described new forms of modernity (Beck 1992, Giddens 1991, Lash and Urry 1994). It has been argued that the concept of reflexivity is central to sociological and economic accounts of late-modernity and has strong parallels with the concept of reflective learning. Beck also argues that freedom of information and education for uncertainty is central to the democratisation of risk society (IPPR 1996).

The process of learning is similar to research, both require reflection on experience, the use of evidence and reason. Our late-modern times require more reflection and research not less. Perhaps the central post-Enlightenment shift has been from positivism towards pragmatism? The work of pragmatist John Dewey would appear to recognise the importance of reflection and thought in times of change; times when habits and routine no longer seem to apply. Miettinen (2000) summarises Dewey’s position.

In adapting to the environment, individuals form habits – routine ways of doing things. When these habits do not function a problem, uncertainty and a crisis emerges and calls for reflective thought and investigation into the conditions of the situation. As in experimental research in natural science, a hypothesis is formulated and tested in practice. (Miettinen 2000:65).
Jarvis (1999) argues that as a consequence of reflexive modernisation knowledge is increasingly legitimised pragmatically, research in practice, rather than based on logic and empiricism alone.

The more we know the more we introduce change, and the more we need to reflect upon it. We need to discover if we have the best solution, since we found out that the knowledge we have about practices we undertake is not necessarily to be equated with the certainty that we have the best solution – so the more we need to research. (Jarvis 1999:26)

In part one there was a suggestion that education is the Enlightenment theme while learning is a late-modern theme. There is an argument that the word education has an institutional focus: it is associated with formal learning and transmission or didactic modes of learning. Whereas “learning” places the learner and learning process centre stage; it recognises learning beyond the boundaries of formal institutions. Usher Bryant and Johnston suggest that concept of education is essentially modernist:

notions of progress, rationality, privileged knowledge and values, and normalisation is built into the educational event. (1998:23).

There has been a shift in the language of policy makers towards learning. I am not convinced this represents a shift in their understanding; as I have argued elsewhere with reference to the “Learning Age” (DFEE 1998): “The central risk of the economic rationale that dominates the Greenpaper is that lifelong learning, while arguably lifelong education, is in practice reduced to lifelong training.” (Dyke 2000:129). More reflective learning in education is necessary to provide a more reflexive education system. Will substituting the “education” with “learning” help bring this about? An alternative would be to reclaim the term education and attempt to re-conceptualise educational praxis. Reflexive education might incorporate the elements of reflexive learning, providing a structured systematic context for such learning. It remains the case that learning is a much broader concept than education and can take place at any time and anywhere.
Usher, Bryant and Johnston (1998) present an argument that adult education in reflexive modernity should; firstly nurture the engagement between teachers, learners and knowledge in non-dependent ways; secondly be open to the unexpected, the tangential and countervailing; thirdly cultivate high levels of tolerance for difficulty, uncertainty and error as acceptance of knowledge as contingent:

Burbules argues that difficulty, uncertainty and error are not flawed states to be overcome but ongoing conditions of the educational process itself, indeed, educationally beneficent correctives to arrogance and complacency. (Usher et al 1998:25).

The model of reflexive learning discussed below is intended to represent reflective learning that does not privilege theory, practice or research, but engages with all three, and encourages an understanding of context. A different relationship to received forms of wisdom is required; one that is described by Usher, Bryant and Johnston in relation to adult education.

Disciplinary knowledge therefore needs to be seen as a sounding board, a resource for critiquing practice-based knowledge and for exposing its limitations. ‘Review’ provides resources that allow the ‘terrain’ of practice to be seen more critically and facilitates location in alternative discourses for ‘seeing’ and acting in that practice. (Usher 1998:92).

In a time of rapid change theory and past experience alone are less helpful as a guide to action, decisions have to be made afresh. Individuals are forced to continuously review their ideas and experience in the light of new and changing information. This constant transformation of information, the creation, construction and renewal of knowledge is at the heart of reflexivity. It is also the essence of reflective learning and can potentially enable people to make more knowledgeable decisions. A reflexive society is a learning society. Jarvis directly connects reflexive modernity with reflection:

Society has become more reflexive, and the knowledge that people acquire is no longer
How can reflective learning provide a basis for reflexive education?

The characteristics of late-modernity have been discussed with reference to social theory. It has been argued that reflective learning provides an appropriate model for post compulsory education in late-modernity. The key ingredients for reflexive education will be discussed and juxtaposed to non-reflexive education. The discussion of how reflective learning can provide a model for reflexive education will refer to the praxis outcomes from the case studies in action research. The case studies demonstrate theory adapted to practice, they provide examples of what worked for practitioners working in different context with a variety of student groups.

Characteristics of non-reflexive education

The Enlightenment promoted a process of inquiry that tested knowledge against reason and experience. The Enlightenment philosophers encouraged the ethos of Bacon; that is engagement with, rather than deference to, received wisdom. Given that Rousseau was also Enlightenment enthusiast for learning by discovery, it is paradoxical that post-Enlightenment education has tended to be deferential to the received wisdom produced by science. It has been argued that a faith in Enlightenment modernity and scientific methods produced self-confidence in human expertise, a belief that would find universal scientific solutions to problems. Knowledge derived from scientific analysis would simply need to be learnt and adopted in practice. The deference to scientific method is exemplified in the twentieth-century approach of Taylorism and scientific management. With this deference to 'expertise', had the Enlightenment simply produced a new set of criteria for received wisdom? Had technical rationality become the new belief system that privileges theory over practice? Usher and Bryant (1989,1998) and Jarvis (1999) suggest that education needs to move beyond
a foundationalist paradigm where academic disciplines direct practice. I suggested in earlier chapters that vocational education has, in recent years, seen a new variant of this relationship; a top down prescription of skill requirements and performance criteria intended to be learnt and demonstrated as competence in the workplace. The NVQ model in the UK replaced a theory to practice relationship with a skill specification to practice relationship. What is necessary is an approach that acknowledges that knowledge is created and recreated in a social context.

The continued dominance of theory to practice, or performance criteria to skill, relationships in education and training is one of the unexpected findings from the interviews. Didactic or transmission modes of education were reported as the norm, even on vocational programmes for practical subjects. Perhaps it was the location of the action research in teaching environments that were relatively didactic that accounted for some of the dramatic improvements in student learning reported. It would seem that for many students learning by applying theory, testing ideas and critically reflecting, with others, on the outcomes of experience was unusual. Their experience was more typically passive and individualistic.

In trying to understand a social learning theory or reflexive learning theory Guile and Young present a case for change to learning within an apprenticeship.

Specifically, we stressed the importance of the work of Lave and Wenger and Engestrom, and how it enables the focus of learning within apprenticeship to be broadened away from its traditional reliance on: an individualistic conception of the learning process; a transmission model of pedagogy; and the specialist training of experts. (Guile and Young 1998:187).

Non-reflexive and traditional approaches to education privilege theory over practice or competence over skill. They tend to rely on didactic modes of learning rather than encouraging learners to critically engage with knowledge claims.
In the case of Kolb (1984) we have a reflective learning model that explicitly does not privilege theory over practice, where the disjuncture between social knowledge and personal experience provides fuel for learning. Kolb's model is logical and in my experience has had a positive impact on teaching and learning in post-compulsory education. However, it has been subject to criticism. It does not recognise the wide variety of learning trajectories (Jarvis 1987) and as such it is a somewhat linear model; in which you follow the prescribed sequence, a logical sequence perhaps is followed but it is not the only path towards reflective learning. Non-reflexive education can be compared to the Fordist mode of production, where the learners have little control over what, where and how they learn. A reflexive model for learning and education would resemble less the assembly line and provide more flexible and social learning pathways. Such pathways would permit the learner to move back and forth between the key elements of reflexive learning and encourage engagement with the Other.

Kolb has recently been criticised as producing "psychological reductionism": experience for Kolb is individualised; it does not take place in a social context nor is it mediated through interaction with others (Miettenen 2000:70). As Dewey observed all observation and experience is theory laden influenced by culture and context.

The above discussion provides a brief account of non-reflexive learning. Non-reflexive learning has the following characteristics:

- it privileges theory over practice, or performance criteria over skill;
- it is individualised and tends to rely on psychological conceptions of learning;
- it favours non-reflective didactic modes of teaching and learning;
- teaching is organised around a linear approach to learning.
The above refers to non-reflective learning, by providing some simplified characteristics of it becomes easier to establish the key features to what might be conceptualised as reflexive learning.

**Elements of Reflexive Learning**

The following discussion attempts to map the key ingredients of reflexive learning as a means of identifying the elements that would provide for reflexive education.

**Theory as an element of reflexive learning:**

All the practitioners in the case studies needed to develop knowledge of theory, or the knowledge claims of others. For some, this referred to the skills and procedures related to their vocational areas so that the learning included knowledge of received wisdom, or theory developed from the experience of others. This might be seen as secondary experience, mediated through teachers during lectures and demonstrations or through the study of text. Dewey (1925) argued that knowledge and theory was ultimately derived from the reflections and experience of others; “Our primary experience as it comes to us is of little value for purposes of analysis and control, crammed as it is with things that need analysis and control.” (Dewey 1925:37). He advocated learning from the experience of others; critical engagement with past experience that “... guides back to the subject-matter of everyday experience” (Dewey 1925:37). For him, primary experience should be informed by the secondary experience. “Experience and Nature” (Dewey 1925) was written to develop such methods in philosophy:

> by which one may go to his own experience, and discerning what is found by use of the method, come to understand better what is already within the common experience of mankind. (Dewey 1925:39-40).

In response to critics who suggested knowledge was not derived from experience and reflection Dewey was scathing. He was critical of Kant's intellectual detachment from the present and his preoccupation with past
thinkers (Dewey 1924:9). However, he appears to have accepted Kant’s “Critique of Pure Reason” (1781) that knowledge derives from experience transformed. In response to his critics he advocates critical engagement with the knowledge gained by reflection on experience by others.

I always wonder on what grounds those who reject the generalized view of “experience”, such as is presented for example in Experience and Nature, justify their own acceptance of the findings of, say, astronomers and/or physicists working in the field of infra-atomic events. I am confident they do not believe these men draw on telepathy or consult spiritualistic mediums; and it is difficult to suppose they believe it all comes through a priori deliverance of Pure Reason. ... I certainly have never claimed infallibility for any particular experience, not even those which rest upon what today is taken to be warranted by way of experiencing called scientific method. (Dewey 1949:386).

Experience and the knowledge claims of others are a key element of Dewey’s method for philosophy; it is also consistent with his approach to learning. The last sentence indicates that for Dewey knowledge is contingent, fallible, open to revision in the light of new information and experience.

Theory, without a privileged status, is recognised as an important source of learning in many of the educational theorists discussed above, including the work of Jarvis (1987, 1999) and Usher and Bryant (1989, 1998). Jarvis (1999) reconceptualises theory as information that in its raw un-reflected state merely represents “potential knowledge” (1999:144) for the learner or practitioner.

Information comes from a variety of sources, and in our learning, its validity is tested through critical thinking (Brookfield 1987). What is learned and accepted becomes knowledge. Knowledge is subjective; information is not. But one person’s knowledge becomes another’s information. Hence the practitioner-researchers’ reports are
Critical engagement with theory together with the testing of theory in practice was a theme that ran through the case studies in action research. Students in the case studies were encouraged to critique, apply and adapt theory to their context, helping to guide their decision making. Some versions of reflective learning tend to reverse the tradition of privileging theory over practice, by celebrating practice alone as a fountain for all knowledge. The assertion here is that such a view militates against critical thinking, first hand practical experience that does not engage with the other or with the experience of the other provides a narrow frame of reference for making more knowledgeable decisions. A risk of relying on primary experience alone is neo-conservative; Dewey noted this and other hazards.

What is averred to be implicit reliance upon what is given in common experience is likely to be merely an appeal to prejudice to gain support for some fanaticism or defence for some relic of conservative tradition which is beginning to be questioned. (Dewey 1925:37).

There is a more pragmatic and simple criticism of approaches to learning that do not provide for learning from theory, from the experience of the others. Learning from primary experience alone represents a recipe for the continual reinvention of the wheel. However, learning from past experience should not be confused with deference to received wisdom: a tradition of critical engagement with theory has been traced from Francis Bacon through to Dewey. The essence of the philosophical tradition advocated here is how we can learn from the present and the past in order to build a better future.

Critical and open engagement with theory as secondary experience is a key element in the understanding of reflective/reflexive learning. Few educational programmes exist without a theoretical base, it is the relationship to such theory, not theory itself, that is critical to providing a reflexive education. Whether it is acknowledged, or not, primary experience is always theory.
laden (Miettinen 2000:62-63); the way we interpret our experience is influenced by our own biography and culture, as Dewey noted:

But this experience is all ready overlaid and saturated with the products of the reflections of past generations and by gone ages. It is filled with interpretations, classifications, due to sophisticated thought which have become incorporated into what seems to be fresh naïve empirical material. ... These incorporated results of past reflection, welded into the genuine materials of first hand experience, may become organs of enrichment if they are detected and reflected upon. If they are not detected, they often obfuscate and distort. (Dewey 1925:40)

A similar point was made by Marx, who argued that people are capable of changing the circumstances they find themselves in even though: “The tradition of all the dead generations weighs like a nightmare on the brain of the living.” (Marx 1885:96). Reflexive learning requires a self-conscious awareness of the theoretical context, of past experience. Secondary experience can provide a valuable source of information; a means to making more knowledgeable decisions. It need not direct such decision making.

Theory as secondary experience relates to the calls for democratisation of Risk Society (Beck 1992, Franklin 1998), the need for public debate and decision making with regard to new and emerging manufactured risk. In searching for a post-modern ethic Bauman (1993) returned to Kant and advocated a selfless concern for the Other. In a world characterised as a information society an increasing amount of experience is likely to be mediated experience. Is not a form of engagement with the Other an essential step away from individualisation, part of being ‘for’ the Other?

There is another dimension to being with the Other as an element of reflexive learning that is the social context of learning which will be discussed below.

Social Context as an element of reflexive learning:

Learning is situated; it involves interaction with others both through secondary experience and primary, lived, experience. The above discussion
noted that practice is theory laden; it is shaped by the social and historical context. Usher, Bryant and Johnston (1997:139) criticise Schon for being individualistic, for not providing an account of the socio-cultural location of practice. Usher, Bryant and Johnston share the view that theory and practice are embedded in social practices that enable individuals to give meaning to and gain understanding of their situation. Learners are shaped by their experience and continually adjust their understanding in the light of new experiences. Usher, Bryant and Johnston refer to "meta practice" (1997:139-142) as the dominant perspective that shapes the way practitioners make sense of their experience; they give examples of modernist, hermeneutic and post-modern discourse as frameworks for meaning. The extent to which individuals are influenced by meta-practice depends on a variety of complex factors; as people are free to act but not always in circumstances of their own choosing (Marx 1885:96). Learning can only be understood in terms of particular social-economic context. Power struggles impact on the process by which people come to give meaning, develop understanding. Usher, Bryant and Johnston recognise the importance of the contested realm of theory and practice.

Thus the theory-practice 'problem' is implicit with what groups of people (practitioners but not just practitioners) say and do (their discursive and material practices), with meanings generated through this and the investments and interests which particular groups and their members have in sustaining or challenging these meanings. ... Theorising does not take place in a vacuum. This is equally the case for the formal theory of the theorist, the informal theorising of the practitioner and the theorising which constitutes the theory-practice relationship in particular ways" (Usher, Bryant, Johnston 1997:141).

Awareness of the social context, the meta-practice that influences decision-making is an essential ingredient in reflexive learning and the provision of reflexive education. Such practice is also constructed and re-constructed in the present through interaction with others. What people say and how they interact with each other, their conversations, dialogue and shared practice
shapes perception and interpretation; understanding is not created in social isolation. Miettinen notes how social context influences science, even when looking down a microscope:

Observation necessarily takes place in a certain activity; context or thought community, using the concepts, instruments and conventions historically developed in that context. (Miettinen 2000:63).

For Dewey, learning involved the lifelong adaptation of knowledge and understanding as a means of coping with new situations. When discussing an individual’s learning Dewey argued “What he has learned in the way of knowledge and skill in one situation becomes an instrument of understanding and dealing effectively with the situations which follow. The process goes on as long as life and learning continue.” (Dewey 1938:44). In addition to raising awareness of the situatedness of their own experience, any form of reflexive education should enable individuals to apply their learning to different situations and context.

Jarvis (1987) emphasised the social context of learning; his model of reflective learning starts with the person and the situation. The sharing and collaborative reflection on experience was a key theme in the case studies. In case two, for example, students from diverse teaching environments worked together to resolve complex tutorial problems; an essential part of the reflective experience was exposure to different perspectives, situations and the ensuing discussion that was generated. In case five the teachers confirmed student understanding by setting different scenarios for the application of their skills.

Learning, therefore, takes place in a social context that is both historically shaped and continually re-sculptured in the light of new experience. Reflexive education attempts to provide forms of social engagement that provide a context, or exposure to a range of context, in which learning can take place. In the case studies the teachers attempted to make their practice more reflective, and turned to collaborative forms of learning as a means of promoting greater reflection upon experience. A response that is all the more
surprising given the current pressures towards individualisation in education and training.

Lave and Wenger (1991) make an explicit connection between the social theory used in this thesis and the importance of knowledge being gained through socially and culturally mediated experience. They (1991:50) refer to Bauman, Giddens and Bourdieu to illustrate the importance of socially located praxis. They summarise their view as:

Briefly, a theory of social practice emphasizes the relational inter dependency of agent and world, activity, meaning cognition, learning and knowing. It emphasizes the inherently socially negotiated character of meaning and the interested concerned character of the thought and action of persons in activity. This view also claims that learning, thinking and knowing are relations among people in activity in, with and arising from the socially and culturally structured world. (Lave and Wenger 1991:50-51).

They provide a social theory of learning, which is a fluid process constituted in relationships between elements including people, activity, knowing and the social world (1991:122). Learning involves participation in a social world where: “participation is always based on situated negotiation and renegotiations of meaning in the world. This implies understanding and experience are in constant interaction – indeed are mutually constitutive.” (Lave and Wenger 1991:51-52). The social context and relationships within which learning takes place are a central feature of reflexive learning (Guile and Young 1998) and provide for more reflexive education. The educationally facilitated use of interaction with others as a means to foster reflection was a feature of the case studies.

Social context as an element of reflexive learning can be defined as situated primary engagement with others. It is situated in a social context framed by biography and meta-theory. The primary engagement with others can be mediated through information and communications technology, but requires interaction rather than simply gaining secondary experience or information
from others. As Guile and Young suggest, communities of practice can be extended to "communities of learning" (1998:185). They argue that reflexive learning provides a representation of Beck’s macro conclusions. Such communities of learning follow the Habermasian ideal speech situation as articulated in Barnett’s (1990) conditions for higher learning. Beck’s case, for instance, is essentially one for more dialogue and the democratisation of decision making, learning is central to this process: as Lash and Wynne argued “And in the final analysis Beck, like Habermas, does understand social change to be a learning process.” (Beck 1992:8).

Reflection as an element of reflexive learning:

The rapid pace and scope of change is a hallmark of what Giddens referred to as our “Runaway World” (1999). The disjunction created by an ever changing context forces people to reflect on new information, to learn (Jarvis 1992). It is when experience presents the new, the unusual, the unexpected we are forced to think and reflect. As Bauman argued “This is the challenge of which knowledge is born. Knowledge picks up from the point of breach, disruption, mis-understanding” (1993:148). In that knowledge is derived from a disjunction, Bauman’s consideration of knowledge is similar to that of Dewey.

The function of reflective thought is, therefore to transform a situation in which there is experienced obscurity, doubt, conflict, disturbance of some sort, into a situation that is clear, coherent, settled harmonious. (Dewey 1933:195).

However, Bauman is not as optimistic that settled coherent harmony will be an outcome of reflection; for him ambivalence is the norm.

Dewey argued in “How we Think” (1933) that teachers can enable students to improve their thinking, his preferred term for such thinking was reflective thought.

The better way of thinking that is to be considered in this book is called reflective thinking: the kind of thinking that consists of turning a subject over in
the mind and giving it serious and consecutive thought: (Dewey 1938:113).

Dewey contrasts reflective thought with reliance on instruction and absorption of received wisdom. Dewey encouraged individuals to be sceptical, to consider for themselves the evidence for particular knowledge claims. He defined reflective thought as: “Active, persistent, and careful consideration of any belief in the light of the grounds that support it and further conclusions to which it tends” (Dewey 1938:118). Dewey distinguishes between reflection and simply thinking by suggesting that reflection requires the person to be critical, not to jump to conclusions or accept the first solution that comes to them. The reflective person must sustain inquiry.

To be genuinely thoughtful, we must be willing to sustain and protract the state of doubt which is the stimulus to thorough inquiry, so as not to accept an idea or make positive assertion of a belief until justifying reasons have been found. (Dewey 1938:124).

In a section reminiscent of Bacon’s “Idols” Dewey warns of the shortcomings of a variety of educational practices. The first concerns disciplinary studies that risk losing touch with the practical; he is critical of scholars engrossed in abstract subjects remote from everyday life. Dewey is equally wary of skill training that is purely mechanical and “restrictive of intellectual power” (Dewey 1938:162). He argued that repetition, drill and the dictation of steps to be taken reduces training of human beings to that of animals. “Practical skill, modes of effective technique, can be intelligently, non-mechanically used only when intelligence has played a part in their acquisition.” (Dewey 1938:162). Thinking and intelligent reflection are for Dewey a central ingredient that help avoid educational practice that privileges theory over practice or practice over theory; the importance of theory and practice is acknowledged by Dewey as long as both are acquired “under conditions that exercise thought.” (Dewey 1938:163).

Reflection concerns the individuals’ thinking processes that transform experience into learning (Dewey 1933, Boud, Keogh and Walker 1985, Jarvis
1987). Such reflection can be prompted by a consideration of theory, the mediated experience of others. It can be sharpened through direct engagement with the primary experience of others, through dialogue (Wildemeersch 1989) or, as discussed above, through “legitimate peripheral participation” (Lave and Wenger 1991). Jarvis notes three types of reflective learning: contemplation, reflective skills learning and experimental learning (Jarvis, Holford and Griffin 1998). All involve intellectual processes that facilitate the transformation of experience into learning, and the teachers in this research aimed at fostering more reflection on the part of their students. In doing so all claimed to have improved student learning.

**Practice and concrete experience as an element of reflexive learning**

The case studies in the action research encouraged students to learn by doing, to apply their knowledge and understanding to a variety of problems or scenarios. The practice for many was simulated performance, often using case studies based on real experience. Even where the subject matter was focused on formal theory, students were encouraged, as in the example of professions allied to medicine in case three, to find solutions to problems set by the teacher. None of the case studies strictly followed “contemplation” (Jarvis, Holford, Griffin 1998:54) as a reflective learning pathway. The emphasis on problem solving in the case studies is Deweyian: “For Dewey, the basis of and reason for reflection was the necessity of solving problems faced in habitual ways of action.” (Miettenen 2000:61). In a late-modern period of rapid change, the disturbance of habit or disjuncture (Dewey 1933, Jarvis 1987) is a frequent occurrence; what people once took for granted is now often called into question, demands reflection and decision making. The pace and scope of change provides a spark for learning. Reflexive modernisation brings to the fore uncertainty, risk and the necessity for reflection and practical decision making in many aspects of day to day living. The educational response to late-modernity advocated here is one that enables individuals as social beings to make more knowledgeable decisions.
The practical activity that students in the case studies engaged in would fall under the category of "learning by doing" (Gibbs 1987). The student activity included applying theory to practice; forms of reflective learning that could be described as experimental learning or reflective skills learning (Jarvis 1998). The learning activities were practice in the sense that they were concerned with an end beyond reflection itself; with resolving a problem, producing a desired outcome or even plan of action. In a sense practice here is similar refers to what Dewey referred to as concrete experience. It overlaps with other elements of reflective learning discussed above but is essentially focused on particular tasks, practical activity and outcomes.

When thinking is used as a means to some end, good or value beyond itself, it is concrete; when it is employed simply as a means to more thinking it is abstract. (Dewey 1933:295).

This is the type of activity the teachers nurtured in order to foster reflection included problem–based and action learning (Jarvis, Holford, Griffin 1998). The teachers simulated real life situations and problems or used the cases presented by the students themselves as a stimulus for practical activity that moved groups towards problem resolution. In his five phases of reflective thinking Dewey advocates the testing of ideas in action (Dewey 1933:206). The testing theory, formal or informal theory, in practice is central to the theoretical position that underpins this thesis. There is a clear relationship between reflective learning and social change.

Knowledge is changing rapidly, so learning is now needed in order to keep abreast with social change. (Jarvis, Holford and Griffin 1998:64).

The understanding of practice has been discussed in earlier chapters with the case studies providing examples of theory applied. Practice as concrete human experience is at the heart of Dewey's philosophy and learning theory. For him learning is located in concrete human experience, in practical activity that enables individuals to improve the quality of their everyday experience or practice. In "Experience and Nature" (1925) Dewey ends the first chapter by asserting the importance of concrete human experience.
If what is written in these pages has no other result than creating and promoting a respect for concrete human experience and its potentialities, I shall be content. (Dewey 1925:41).

The above discussion has attempted to identify the key elements a learner must have experience of in reflexive learning:

- Theory or knowledge claims
- Social context
- Reflection
- Practice or concrete experience

These elements are not mutually exclusive, they clearly overlap and interact with no single element having a privileged position over any other. Learning as the transformation of experience is influenced by the relationships between all four elements. Other theorists would have perhaps subsumed the social context elements within a category of theory; such a position would have been consistent with Dewey (1925). The position adopted here accepts the view of Jarvis (1987) Miettenen (2000) and Guile and Young (1998, 1999) that learning theory has tended to individualise learning and not provided sufficient recognition of the social context in which it takes place. In the case studies students were encouraged to work with others, and consider a variety of contexts where their learning might be applied.

How can reflective learning be adapted: a possible model for reflexive learning and reflexive education.

The four elements of theory, context reflection and practice are evident in the work of Peter Jarvis (1987, 1999). A difference here is, perhaps, greater emphasis given to theory and context. The four elements provide an interpretation consistent with the work of Usher, Bryant and Johnston (1997). In attempting to reduce the products of this inquiry to four key elements I am trying to provide a framework that facilitates understanding. There is no
claim to universalise, simply an attempt to summarise this discussion and suggest a framework that might be of use to others. In placing emphasis on a philosophy or social theory of learning, psychological aspects have been understated; for example, there has been limited discussion on non-reflective forms of learning.

Reflexive Learning I

![Diagram 10.1]

Any representation of reflexive learning or education would move beyond linear learning, the sequence of learning activity needs to be flexible and learner centred. Learners should be able to move between theory, practice, reflection and consideration of context. The elements of reflexive learning are represented as a model in Diagram 10.1. This representation of reflexive learning is reminiscent of Usher and Bryant (1989) and their captive triangle of theory, practice and research, except it is placed within a social context. Diagram 10.1 does not represent learning as a developmental process that can grow, change and adapt to new situations and pursuits of the learner. The learner can move back and forth between any of the elements in any particular order. As suggested earlier, there may be logic to a set of sequences but these do not necessarily capture all the potential pathways for
learning situations. Dewey presented five stages of reflective learning (1933) in a sequence that mirrored natural science. Although it is suggested here that there are four core elements to reflexive learning (theory, practice, person in context and reflection) the sequence of learning activity is not fixed. The ethos that Dewey created for his sequence of five phases of reflective learning is accepted here, any model is intended to represent an interpretation to be used adapted or rejected by others, as they find appropriate.

In conclusion, we point out that the five phases of reflection that have been described represent only in outline the indispensable traits of reflective thinking. In practice, two of them may telescope, some of them may be passed over hurriedly, and the burden of reaching conclusion may fall mainly on a single phase, which will then require a seemingly disproportionate development. No set rules can be laid down on such matters. The way they are managed depends on the intellectual tact and sensitiveness of the individual. (Dewey 1933:207).

Reflexive Learning II (Molecule of Learning)

An alternative, and preferred, representation of reflexive learning is that of a molecule of learning; the shape of a tetrahedron with the points representing each element (Diagram 10.2). If the lines between each element were represented as arrows the arrows would flow in all directions. The molecular
analogy works as it suggests the smallest unit of reflexive learning would contain each of the elements of reflexive learning. As molecules of learning connect with other aspects of experience new molecules can be added enabling the individuals learning to grow, this developmental aspect is explored below. The “molecular” analogy is used as an aid to understanding. It is not suggested that because nature in the form of molecules has a set of characteristics then learning must also conform to the same pattern. The accusation of biological determinism is a risk of using the term molecular, but no deterministic, or other, organic analogy is intended.

The molecular model of learning reflects aspects of the learning that was reported in the case studies in action research. Case two started with experience in the form case study problems from the practice situations of the students. After presenting a case study to a syndicate group, a discursive context, the students together reflected on an appropriate course of action and recorded the outcomes of those individual and group reflections. These initial reflections provided an agenda for research. Students next studied the experience of others in the form of formal theory and consultation with other professionals related to the practice. The research findings were then reported back to the case study syndicate. Following further reflection in a social context a plan of action was agreed for each case study presented to each syndicate group. Practice in this learning context was simulated as case conferences, based on cases derived real practice situations. The decision to act, or not, upon the agreed action plan would remain a decision for the individual practitioner in their work environment. This case study contained:

- **Experience**: in the form of case studies derived by each student from their practice situation.

- **Social Context**: in the form of discussion about each case with other practitioners and the requirement to reach an agreed plan of action. Practitioners considering cases from other practitioners working in different context to their own also provided for a greater awareness of
how context influences decision making in practice. Students were exposed to a variety of contexts as part of the learning.

- **Reflection**: both individual reflection and that facilitated by group discussion was recorded as part of the process of decision making.

- **Theory**: in the form of research into related text and consultation with 'experts' from related professions. Theory was reported back to each syndicate group for further reflection that enabled them to make more knowledgeable decisions as a group.

It was suggested earlier that the National Vocational Qualifications (NVQ) system in the UK has preserved a theory to practice model in the form of a statement of occupational standards, or specification of competence, to practice model. NVQs could be said to assess theory in the form of specification of knowledge and understanding. To their credit NVQs, also emphasise the assessment of practice, performance, in a variety of context that are defined as range statements. However, NVQs remain essentially “Fordist” (Dyke 1994) in that they do not specifically nurture reflection or adaptive responses to context. Candidates for an NVQ are assessed in terms of very specific standards that have prescriptive and privileged status. They do not represent a framework for practice that encourages a candidate to reflect upon, adapt key principles and make an informed decision that enables them to respond to a specific practice situation. The performance criteria of NVQs are intended to direct, provide routines of practice rather than facilitate more adaptive and knowledgeable decisions by individuals in a rapidly changing world.

**From Molecules to Modules of reflexive learning**

If Diagram 10.2 represents an individual element of learning it could also provide a basis for a unit or module of learning these can connect with other units of learning in either a linear or non-linear fashion. Elements of theory, practice, reflection or context can provide a nexus to other molecules or units of learning. A new experience may connect with another element of previous
learning and represent the springboard for the learner to construct another

Molecules of Reflexive Learning

Diagram 10.3

molecule of learning. As Boud, Cohen and Walker (1993:12) emphasise, learning is a holistic experience that cuts across different experiences, context and time. In the case studies in action research the practitioner researchers reflexively connected the experience of the action research with their students and used this to develop further understanding of their own learning as teachers. In the interviews the teachers discussed other possible adaptations and context where the learning from the action research could be applied. As individuals connect elements of their learning to other aspects of living and learning molecules, join together. The molecules can build in a three dimensional way. As each molecule interacts with each other, multiple learning pathways are created, producing what might be described as crystals of learning. An individual’s crystal of learning is extracted from the social context and cut with individual life experience. The image of three dimensional crystals of learning contrasts with the more linear representations of learning spirals used to represent, or perhaps more accurately misrepresent (Miettenen 2000:64), Dewey’s understanding of learning (Kolb 1984:23). One can use images derived from the natural sciences to illustrate potential learning pathways or learning constructs where units or molecules of learning connect multiple ways (Diagram 10.3). There
are many alternative representations of constructs from a basic tetrahedron; they need not be as tidy and symmetrical as those represented above.

The use of a tetrahedron to represent a model of social learning is an attempt to simplify the emergent themes from this research and provide a framework for action. The model does however risk attracting the criticism levelled at Kolb, it could be said to over simplify the process of learning. The model represents a simplified framework of reflexive learning that is non-linear. Such a framework might be used in educational planning and course design.

A number of influential policy documents have presented a case for modularization of the curriculum. The importance of providing a coherent qualifications framework that enables progression has been made elsewhere (Dyke 2000). It may be possible to encourage progression and coherence in modular qualifications frameworks by seeking to identify how one module connects in terms of theory, practice, reflection or context connects with other modules. If the key elements of reflexive learning are represented by theory, experience, context and reflection there may be a case for evaluating modules of learning against such criteria. Individual modules of learning provided in education or training should enable the learner to engage with each element of reflexive learning.

The endorsement criteria provided by the University of Industry to companies seeking to use the Learn Direct brand goes some way to meeting the requirement for reflexive learning. The University for Industry encourage non linear learning with short modules or units of learning being made available. The specification for learning material includes reference to features which are consistent with the model of reflexive learning presented here. To achieve University for Industry endorsement, learning materials must:

- **Contain content** that is accurate, up-to-date and relevant to the learners' needs;
- **Follow a clear learning strategy** to achieve learning, allowing opportunities for learning activity, reflection, reinforcement and self-assessment.
Learning materials must include activities which:

Offer opportunities to apply newly-acquired knowledge and skills in real or simulated settings

Are designed to engage the learner in participative learning

Encourage interaction and dialogue with others

Make the learning relevant to the learner, interesting, enjoyable or fun.

Allow self-assessment and regular feedback

Allow learners to monitor, record and steer their progress through the package

Contain statements relating to the context of learning delivery (University for Industry 2000).

The above criteria includes reference to theory, reflection, practical activity and providing a social context for participative learning. It remains to be seen whether or not the University for Industry brand of Learn Direct provides for reflexive learning in practice, but the criteria would appear to be consistent with the model of reflexive learning presented here and enable a form of reflexive education or training.

Information and Communications Technology

The University for Industry is promoting online learning. As Guile and Young (1998) note, Information and Communications Technology can facilitate reflexive learning. The internet is an obvious medium for information and theory. Imaginative learning materials can provide opportunities and stimulus for reflection and practice. Perhaps an under-utilised aspect of online learning is the potential for dialogue and the creation of ‘ideal speech situations’ where learners can exchange ideas with others. Guile and Young (1999) acknowledge the potential of this aspect of online learning for creating “distributed communities of learning” (1999:123) and link this to a social theory of learning derived from Engestrom, Lave and Wenger and Vygotsky.
In a development linked to this research I have attempted to provide such a community of learning through the use of Computer Mediated Conferencing.

The conference facility aimed to encourage students to engage with information, transform it through discussion, questioning and critical evaluation. It attempts to transfer the benefits of classroom face to face teaching to the web and encourage academic discourse through threaded and moderated discussion. The aim is structured discussion not simply unstructured ‘chat’ or the provision of a bulletin board. The conference facility enabled information, ideas, discussion and knowledge to be constructed through the conference rather than being simply reported on it. Students are encouraged to locate their discussion in reading and the literature as well as their own experience. The use of web based conferences facilitates a rapid response to changing information, hyper links enable the students to study information elsewhere on the web and focus the conference on discussion and evaluation of their reading. The conference aims to provide a mix of theory, practice, reflection and dialogue. As a case study in action research the Computer Mediated Conference is still work in progress and was therefore not incorporated into Chapter Eight. The use of Computer Mediated Conferencing provides a means of delivering reflexive learning in late-modernity. It also enables me to end in the beginning as it reflects an ethos articulated by Francis Bacon: "Reading maketh a full man; conference a ready man; and writing an exact man" (Bacon 1625:209). If Bacon had explicitly incorporated reflection he would have touched each element of reflexive learning presented here.

**Personal Evaluation**

This thesis has set out to examine the extent to which the social conditions of our times have changed. It has done so by comparing Enlightenment modernity with aspects of contemporary social theory and thereby presenting our current social condition as late-modern. After considering how our social condition has changed and having sketched the characteristics of late-modernity the thesis then asks questions about how education and training,
teaching and learning can and must adapt in response to these changes. It has been argued that there is a connection between the concepts of reflexivity in social theory and reflective learning in education; that reflective learning could provide a basis for the development of reflexive learning and more reflexive education.

The theoretical conclusions that reflective learning has become more pertinent to our times were tested in small-scale case studies in action research. Each of the case studies reported improvements in students learning when the Jarvis (1987) model of reflective learning was used and adapted as a framework for teaching and learning. In chapter nine cross-case analysis of the action research revealed a number of common themes; the teaching and learning strategies adopted were similar to those recommended in higher education. All the case studies nurtured greater reflection in learning:

- students were encouraged to engage critically with theory and test it in practice;
- reflection enabled students to connect theory and practice in multiple and less hierarchical ways;
- there was the use of more open dialogue between peers, and with teachers, facilitated by much greater use of question and answer by teachers;
- students were given more autonomy and control over their learning;
- students were encouraged to work through the possible consequences of their actions; teachers facilitated this process by using case studies and ‘what if’ scenarios.

In this final chapter the theory and practice have been woven together to develop models of reflective practice into an agenda for reflexive learning and more reflexive education. The key elements of reflexive learning have been defined with reference to the analysis of social theory and the case
Limitations and weaknesses

The exploration of social theory, in order to provide an analysis of contemporary social change, is a major part of the research. One can not tease out an agenda for education without a clear focus on the themes that characterise contemporary modernity. When the research was started there was considerable academic debate conceptualising the modern. Four years on there appears to be less concern with the modes of post-modernity challenged here, even Richard Rorty (1999) held up as an example of post-modernism (Parker 1997), has challenged relativism and provided praise for Habermas and aspects of Enlightenment thinking. Zygmunt Bauman (2000), whom I have placed as theoretically close to Anthony Giddens, also appears to have shied away from the term post-modern. In retrospect I may, have been over concerned with locating a perspective within these language games.

For a thesis concerned with praxis in education there is a lot of social theory, more perhaps than originally intended. The thesis aimed to provide praxis for post-compulsory education whereby theory and practice mutually shape each other. It clearly is not possible to generalise from small-scale case studies in action research. From a practice point of view perhaps there is an argument for more case studies. I personally would not wish to substitute the theoretical explorations in this thesis for more case studies in action research. The information technology action research I started as a consequence of this research continues as work in progress. In retrospect I would have liked to have incorporated this project in the thesis as it is so illustrative of the emergent theory developed in chapter ten.

An evaluation of the research process was provided in chapter nine; where it was noted that the ASQ could prove to be a useful tool for future research, but given the application here it was less revealing than was hoped. The
interviews were more reflexive on the part of the interviewee than anticipated, in being more reflexive they ‘fitted’ the model of reflexive modernisation. However despite being reflexive I am certain the interviewees ‘told me how it was’ they were not afraid to be critical of the process or themselves, their comments were also supported by other sources of data. The interviews report teachers changing their views in the light of new experience; even where there was a high degree of scepticism from the outset. However, on reflection the reflexive element of the interviews was possibly exaggerated by my professional position. I was known to each of the teachers as a lecturer in education, who was keen to support practitioner innovations in teaching and learning. Given my professional role it may not have been surprising that the teachers turned from their student learning to reflect upon their own practice and continuing professional development. That Peter Jarvis supervised this research was not made explicit to the action researchers, I had not considered it an issue and I am confident this was not a source of bias; the teachers provided critical evaluations supported with a range of data. The social context of the interviews, in terms of my professional role, possibly made the interviews more reflexive, more of a learning process for those involved than they would otherwise have been the case.

**Strengths**

I believe the thesis challenges a view of the Enlightenment that features in some varieties of post-modern social theory. Parallels between the Enlightenment and contemporary modernity have been drawn and differences noted. I have presented a case that Education was a key, although relatively unacknowledged, Enlightenment theme. I have shown that pragmatism was a characteristic of Enlightenment thinking that has carried through to contemporary modernity via Dewey and more recently Rorty. My perspective on the Enlightenment has recently been reinforced. Roy Porter writes “Post-modernism has one virtue at least – it reopened enquiries into modernity and its origins.” (Porter 2000:476).
The theoretical implications of late-modernity presented have been applied in action research on reflective learning. The teachers were convinced that reflective learning provided improvements in student learning. From the cross case analysis of the action research collaborative problem solving was an emergent theme in successful practice. This theme is consistent with Dewey's approach and corresponds with the democratisation ethos in the late-modern analysis. It provides, as Guile and Young (1999) argue, a microcosm of Beck's Risk Society analysis, and evidence towards the construction of a social theory of learning. The basis of Beck's assumptions that reflexivity and reflection are completely separate concepts, a view challenged here, has also been criticised elsewhere (Smart 1999). All these recent examples from social theory provide support for the late-modern perspective presented here. The thesis connects two unrelated themes that of reflexive modernisation in social theory and reflective learning in education.

The thesis examines connects and builds upon what I consider to be strong theoretical traditions. It presents a philosophical, sociological and educational case for reflective learning, one that is illustrated in practice. A model of reflexive learning has been developed and is represented by a tetrahedron; a 'molecular' analogy is used to describe how learning pathways create either linear or non-linear crystals of learning. The model represents the core elements of analysis provided in earlier chapters, it incorporates social theory, educational theory and the case studies in action research. The model attempts to represent the thinking that underpins this research and is therefore similar to other models of reflective learning reported in this thesis. The model is not claimed as definitive or universalistic, it is hoped it might simply promote further discussion, research or provide a possible stimulus for future action.

**Future research**

The research presented here originated in my practice in teacher education, it has been nurtured by explorations in social theory and finally returns to
practice with a model for reflexive learning. Future research might focus on the application of the model of reflexive learning as a curriculum planning and evaluation tool in post-compulsory education. Modules of learning could be audited against the degree to which they provide for reflexive education. However, the model would first benefit from further development and testing in practice.

Martin Bloomer of Exeter University is reported to have received funding for similar research where a symbiotic relationship between theory and practice is explored as praxis and within a social and cultural context (Kingston 2000). Future research could work together with practitioners in action research and apply the reflexive learning model in their practice. It is interesting to note Bloomer's comments about his research reported by Kingston:

> We want to support teachers in investigating their own personal theory making in practice and its impact upon practice. ... The thrust of it of it will be to examine educational practice in the full complexity of the changing world – that’s as sharp as I can get to the focus. (Kingston 2000:46).

There are parallels with the approach to research adopted here, which aspired to a participative ethos of action research. Perhaps a difference is the focus on engagement with the knowledge claims of others rather than personal theory making in practice; what Young has referred to as "Bringing knowledge back in" (Young 2000:108).

The future research advocated here encourages practitioners to critically engage with theory and with others, to reflect upon and adapt what they learn to new situations and apply their learning in practice. Reflexive learning is essentially about enabling learners confronting a rapidly changing world to make more knowledgeable decisions and take more knowledgeable actions. Such reflexive learning connects directly with reflexive modernisation (Beck, Giddens, Lash 1994). Further action research could be promoted by converting the thesis into a ‘Guide for Praxis’ written for an audience of practitioners unfamiliar with social theory. Rather than providing an exploration of social theory, such a guide would simply state the position
worked through here. The guide could provide a framework for staff development; provide case studies and exercises that enable practitioners to think about the models of social learning theory in relation to their practice. An aim is to provide a rich source of information for practitioners seeking to make more knowledgeable decisions about practice.

Future research could develop reflexive learning as a social theory of learning. The model of reflexive learning presented in chapter ten, while representing a tentative end point of this thesis, is starting point for future research. I believe the potential for asynchronous conferencing is an under utilised aspect of information technology in post-compulsory education. The development of learning environments, web based or otherwise, which incorporates all the elements of reflexive learning is a theme for future research.

Concluding Comment

Reflexive learning as developed here is intended to meet the needs of learners in late-modernity. In a world full of conflicting and changing information, individuals need to learn how to interpret, apply, evaluate and synthesise information. They need to transform information into knowledge that can enable informed decision-making. If post-compulsory education and training is to help individuals live in late-modernity, reflexive learning needs to be a central theme of education and training. Despite the centrality of reflection and reflexivity in social and educational theory reflective learning remains peripheral to policy in vocational education and training (Dyke 2000).

In the "Politics of Risk Society" (Franklin 1998) Anna Coote argued that public policy must engage in "a new political culture which supports an informed and reasonable scepticism about scientific or expert knowledge" (Franklin 1998 p.127). Decisions relating current scientific developments in nuclear, biological and chemical technologies for example can effect all our futures. Late-modern theorists (Beck 1992, Giddens 1990, Franklin 1998) argue for more public involvement in decision making. Non-reflexive education or training alone is not likely to meet the needs of individuals, work
or democracy. Whereas reflexive learning within lifelong education can facilitate the process of democratisation, economic development and decision making in Risk Society. It will enable people to plan and make judgements in an age of uncertainty as Anna Coote suggests:

Planning for uncertainty involves realistic appraisal of the evidence at our disposal, a deep understanding of the present (not marred by a rose tinted view of the past.) It involves knowing that we cannot go back. (Franklin 1998 p.130).

Reflexive learning in post-compulsory education has potential for enabling individuals, organisations and communities to engage with expert opinion and make informed decisions about all aspects of living in late-modernity. If reflexive learning can enable individuals to make more knowledgeable decisions and take more knowledgeable action it has a positive contribution to make to the democratisation of late-modernity. In a risk society there are no guarantees that more knowledgeable decisions can build a better future. One can only hope that such decisions reflect an ethic of concern for the Other and future Others.
Appendices

1. A Framework For Action Research

Over the last four years I have supported small scale action research projects completed by practitioners on education courses. Teachers have conducted action research that has replaced non-reflective learning with reflective practice. The success of these projects has prompted the extension of the research suggested here. This framework for action research addresses the broad research question:

Can the application of reflective learning by practitioners improve student learning in post-compulsory education.

The action research stages and an example of an action research project is summarised below:

1. Participants are provided with this explanation of reflective learning and suggestions for data collection.
2. Participants integrate reflective learning (Jarvis 1995) in their course design and teaching methods.
3. Participants are encouraged to use standardised data collection methods.

Example of a project with an engineering class:

The original (non reflective) course design consisted of a three hour theory lesson in a classroom and a four hour practical lesson in the workshop. Theory and practice were considered as separate entities that were rarely evaluated or linked.

The reflective learning course design integrated theory, practice and included systematic evaluation. A typical lesson took place in the workshop and included a short input of theory followed by a related practical exercise. Each practical exercise was then evaluated in terms of student experience and the theoretical input. This short cycle of theory, practice and evaluation would then be repeated.

Using standardised data collection methods the reflective and non reflective classes are compared in terms of:

- Assessment results.
- Student perception of course experience.
- Teachers perception of course experience
- An approach to study questionnaire
A method for action research:

1. Participants teach a topic or module in the conventional way and use a number of research tools to analyse and evaluate student learning. This initial stage of the research provides a benchmark from which to judge the implementation of reflective learning and facilitate the measurement of value-added learning.

2. Participants redesign their teaching in terms of reflective learning and the Jarvis Learning cycle. Their teaching encouraged more evaluation, thinking and reflection by the students. On completion of the topic or module the participants will use the above research tools to analyse and evaluate student learning.

3. Participants will compare the results of stage one and two above and evaluate the model as a means of improving student learning. The evaluation will be reported through a focused interview with the facilitator or in the form of a written report.

Research Tools for Data Collection:

1. Quantitative data:

Approaches to Study Questionnaire (ASQ):

To test if students have adopted a 'Deep' or 'Surface' approach to learning. The questionnaire will test students' views to assess whether or not the implementation of the Jarvis model produces a Deep approach to learning. The ASQ is intended to be used at the start of the research and again at the end. The ASQ is available from M. Dyke.

Formative Assessment of Reflective Learning by teachers:

Teachers will record the formative or summative assessments of students and compare results before and after using the Jarvis model.

2. Qualitative data:

Student Evaluations

Use of Nominal Group Technique to provide qualitative feedback on student experience of learning. Guidelines provided by M. Dyke.

Teacher Diaries and Lesson Evaluations

Teachers may wish to record their own professional evaluation of the experiment both in terms of a diary and through open lesson and module evaluation questions.
Interviews:
Teachers will be provided with a set of questions that will form the basis of a focused interview. The interview will be recorded and used as data for research by M. Dyke.

Guidelines for Nominal Group Technique

Nominal Group Technique is a method of gaining evaluation feedback from students about their course experience. The technique is similar to the teaching method of ‘snowballing’. With Nominal Group Technique (NGT) students might work on the first stage of an evaluation task individually, the next in larger groups and end with a whole class plenary.

NGT can provide a rich source of qualitative evaluation data that is student centred. NGT provides a structure for students to tackle the difficult task of commenting on their course experience. With NGT students can set the agenda and decide which issues need to be addressed, as a group they can prioritize the issues raised and agree recommendations for future action. In another sense it is possible with NGT for students rather than teachers to decide which evaluation questions need to be asked, collate the results and produce an action plan. NGT can therefore be time efficient for the teacher. There are various approaches to nominal group technique; the one used below was developed from Ashcroft (1994:174-175); it is open to adaptation.

Stage One:

The tutor asks general questions to get the students started for example: “What helped me learn from this course” and “What hindered my learning on this course”. These questions can be more specific and ask students to list helpful and unhelpful factors in different aspects of the course such as theory, practice reflection and evaluation. Students spend a few minutes individually “brainstorming” the answers to the questions and compile a list of ‘helpful’ and ‘unhelpful’ factors.

Stage Two:

All items from each student’s list are read out and recorded on board, flipchart or projector. Duplicate items are crossed out. Once listed each item is clarified to make sure everyone understands what they mean. No critical responses are allowed at this stage.

Stage Three:

In small groups the students record their list of ‘helpful’ and ‘unhelpful’ factors in priority order from one to ten. From this list students are encouraged to write action points related to two ‘helpful’ and two
'unhelpful' factors that will help improve the quality of the course. Students should be aware that in order maximise effect, action points will need to convince others involved in the design, delivery and evaluation of the course. People tend to respond more favourably to feedback that is positive and constructive.

Stage Four:

Discussion and plenary. Action points from each group are recorded and discussed. A voting system can be used to decide the priorities for action with each student given three votes.

Stage Five:

Tutor records the outcome of the plenary discussion and voting. Tutor collects a completed form from each group with their agreed priorities of 'helpful' and 'unhelpful' factors and each groups' action points. Tutor produces a summary report.

This technique directly involves the students in the evaluation process; it is democratic and allows the student group to set the agenda, discuss evidence and make recommendations. It is participatory and directly concerned with improving practice for these reasons it is an appropriate data collection method for action research.
FE Approaches to Study Questionnaire

This questionnaire is about your approaches to studying. I would like you to show whether you agree or disagree with each of the 32 statements listed below. I am interested in your approaches to study in general. If your answer would be different for different courses, you should reply with regard to this course. Please circle the number beside each statement which best conforms with your view.:

- 4 (++) means definitely agree
- 3 (+) means agree with reservations
- 2 (?) is only to be used if item does not apply to you or if you find it impossible to give a definite answer
- 1 (-) means you disagree with reservations
- 0 (--) means you definitely disagree

I recognise that some of the statements might not be appropriate for one reason or another, in which case you should circle "2" rather than leave a blank. I also recognise that this type of questionnaire does not allow you the freedom you might like to give a fuller and more personal reaction to some of the questions. Feel free to add any comments. Please answer every item quickly by giving your immediate response by clearly circling one appropriate code number. Thank you for your cooperation:

1. I try to relate ideas in one subject to those in other subjects, whenever possible. 4 3 2 1 0
2. I usually set out to understand thoroughly the purpose of what I am asked to do. 4 3 2 1 0
3. Ideas from study often set me off on chains of thought of my own, only marginally related to what I was studying. 4 3 2 1 0
4. I like to be told precisely what to do in coursework or other assessments. 4 3 2 1 0
5. I often find myself questioning information given on courses. 4 3 2 1 0
6. The continual pressure of work - coursework, assessments, and deadlines often makes me tense and depressed. 4 3 2 1 0
7. I find it difficult to 'switch tracks' when working on a problem. I prefer to follow each task through as far as it will go. 4 3 2 1 0
8. On this course the simple truth seems to be made unnecessarily complicated 4 3 2 1 0
9. I usually don't have time to think about the implications or applications of what I have learnt. 4 3 2 1 0
10. In trying to solve a problem, I let my mind wander freely to begin with, even if I don't seem to be much nearer a solution. 4 3 2 1 0
11. I generally put a lot of effort into trying to understand things which at first seemed difficult. 4 3 2 1 0
12. I prefer courses where there is a wide choice of options. 4 3 2 1 0
13. A poor first answer in an exam makes me panic. 4 3 2 1 0
14. In trying to understand new ideas I often try and relate it to real life examples.

15. When I study I try to memorise important facts which may come in useful later.

16. I like to play around with ideas of my own even if they don't get me very far.

17. I am usually cautious about making conclusions unless they are supported by evidence.

18. When I am tackling a new topic, I often ask myself questions about it which the new information should answer.

19. Often I find I have studied things without having a chance to really understand them.

20. I like to work out different ways of interpreting evidence or findings.

21. I find I have to concentrate on memorising a lot of what I need to learn.

22. Often when I'm reading books, the ideas produce vivid images which sometimes take on a life of their own.

23. The best way for me to understand a technical term is to remember the definition given in the course materials.

24. I need to study a subject in depth before I demonstrate my understanding on paper.

25. Although I generally remember facts and detail I find it difficult to fit them together into an overall picture.

26. I tend to read very little beyond what is required for completing assessments.

27. Having to speak in class is an ordeal for me.

28. I like to work through complex problems and reach a logical conclusion.

29. I find it helpful to 'map out' a new topic for myself to see how it all fits together.

30. I find I tend to remember things best if I concentrate on the order in which the teacher presented them.

31. When I read, I generally examine the evidence carefully to decide whether the conclusions are justified.

32. Teachers seem to want me to be adventurous in making use of my own ideas.

Your Course Name and Level

Your Education/Training Organisation

Your Date of Birth

Thank you for completing this questionnaire in confidence. Further information about this questionnaire can be obtained from: M. Dyke at Farnborough College of Technology; Tel: 01252 407135.

ASQ adapted with permission from J.T.E. Richardson (1990)
2. A Model of the Learning Process

The Jarvis model developed from ideas identified with Kolb (1987). The Jarvis model originates in a study of how students report their learning; it provides a flexible model of reflective learning.


Jarvis's Model: Definitions:

With reference to Jarvis (1995) the following attempts to define the key terms of the learning cycle:

Experience

"A wise person learns from experience the wiser person learns from the experience of others" (Plato).

Primary Experience

Learning from experience, experiential learning, often refers to learning from the primary experience of the individual (the self). Such experience could be gained at home, in work or education, it occurs through all aspects of day to day life. Primary experience can be gained through group interaction or individually. Primary experience may also be gained through structured educational activities such as practicals, visits, work placements, role plays and simulation.

Secondary experience

Learning from secondary experience is common in educational settings. This involves learning from the experience of others. Secondary experience is gained through language it can be gained through lectures, debates,
discussion, the use of any audio-visual media including books, broadcasting, film, information technology. Learning from secondary experience is most effective when communication creates a dialogue, is genuinely a two way exchange of experience and understanding; such dialogue and interaction are essential to reflective learning from secondary experience. Reflective learning from secondary experience is more likely to occur when the learner thinks, asks questions, tests the ideas and search for meaning even truth.

**Practical experimentation:**

Practical experimentation refers to that derives from action or learning through doing. It might involve a practical exercise that enables theory to be applied. It may include: student practice that follows a demonstration; writing of essays and assignment; experiments in science; workshops on particular tasks; problem solving exercises; work experience; simulation and role play.

**Reasoning and reflecting:**

Put most simply reasoning and reflecting refers to thinking. It is concerned with the realm of ideas, thought processes and reasoning. It is the process that facilitates the knowledge and understanding that enables students to apply theory to practice. It facilitates the scepticism that enables students to begin to evaluate theory and practice. It is characteristic of the intuition and inference that Schon refers to as ‘thinking on your feet’. It can be facilitated through; questioning; learning logs and diaries; use of video recordings; discussion; debrief and feedback sessions; questioning; hypothesising and ‘what ifs?’; case studies; discussion and debate; brainstorming and buzz groups; snowballing; and the initial planning of any activity. Reasoning and reflection can include evaluation activities that draw on the experience of the learner.

**Evaluation**

Evaluation refers to the systematic analysis and evaluation of a range of evidence and experience from which one can reach conclusions. It should be objective and based on a critical analysis of evidence against criteria. Evaluation differs from reasoning and reflection in the systematic use of evidence rather than thought processes alone, reasoning and reflection may help formulate the questions, opinions and ideas; evaluation should enable students to find the answers. Examples of evaluation activities include; reports on activity; critical analysis of theory and practice; plenary sessions; data analysis and conclusions; self assessment; peer assessment; SWOT analysis; critical incident analysis; seminars; action planning. Evaluation can include the evaluations of others, the students teacher for example.

No particular teaching and learning method is exclusively associated with one part of the learning cycle. It is not the method that determines whether it is used for experience, practical experimentation, reflection or evaluation but how it is used. Case studies for example can be to stimulate discussion and reflection, for practical experimentation and problem solving or to provide
secondary experience of theoretical approaches. A teaching and learning method applies to that aspect of the learning cycle for which it was designed. The examples above simply suggest approaches that may complement a particular aspect of the learning cycle.

**Two other models of reflective practice**

### The Lewinian / Kolb Experiential Learning Model

- **Concrete Experience**
- **Practical Application**
- **Observation & Reflection**
- **Abstract Conceptualisation**

### Notes on Lewinian / Kolb:

- Concrete Experience (Experience)
- Observation and reflection (Reflection)
- Conceptualisation and generalisation (Theory)
- Active experimentation (Practice)

Learning can start at any point, but must follow the steps and direction of the arrows. All stages need to be completed in order for reflective learning to take place.
Notes on Usher and Bryant:

Usher and Bryant is represented here as a model of reflective learning. Learning can start anywhere and follow the arrows in any direction. All three elements need to be included for reflective learning to take place. Research includes evaluation and reflection.

Further reading on the above approaches:

The following books are good introductions to the reflective learning process; and teaching and learning methods. It needs to be noted that the Gibbs book provides guidance for the implementation of the Kolb rather than Jarvis model of reflective learning. The Usher and Bryant book offers an alternative approach perspective on reflective learning:


Jarvis, P 1995 Adult and Continuing Education 2nd Ed. Routledge. ISBN 0 415 10242 1

3. Interviews
Example Interview Transcript: Case One

M Tell me something about the group you have studied.
C The main control group that we have been using is a BTEC NC2 class. Approximately 20 students in that class only one female.
M What is NC2?
A National Certificate ONC second year.
C We have managed between the two of us to teach four full modules. I’ve taught a full module during the year and a half module and Adrian.............
A Yeah, the time I’ve had the students we, I’ve done 2 half modules.
C Another group that we’ve managed to compare the students with is a third year group. Slightly less.
M The NC2 were what year?
A Third year again, yeah.
C Third year, but there was a slight mixture in ages and some more mature students in that group. The oldest guy was what 48 I think.
A We have got what we call mature students in the group.
M The experimental group was a bit older?
C Yes. The other group um they’re all about 19-20. It is a slightly smaller group 11-12 people.
A Final year apprentices doing the same course of study, that will lead to their NVQ III.
M ONC, what level NVQ? Are they doing NVQ as well?
A Yeah, we run them together. So end of .... first year ONC they pick up a level II and then the second year they pick up a level III. So they do both awards at the same time.
C And use it as underpinning knowledge.
M The third years are doing level III?
A These third years are doing level III.
Are they full-time or part-time students?

Part-time day release final year apprentices.

Are they doing core skills and modern apprenticeships?

Yeah. Some of them are, because they’re in the third year and would be the first of the modern apprentices.

You had a control group and experimental group. The control group you taught traditionally, the experimental you used reflective learning. Could you explain the differences in the teaching between the two groups?

From my side of things (reflective group), the experimental group, we went from a very classroom based theory lesson, dictating notes to one where we read scripts and tried to link that with what went on in workshops. So we had a little bit of theory then we would go into the workshop to practice what they had been taught and then back in the classroom to pick up conclusions, analyse. That was the main difference between the two groups.

So you had a short burst of theory in the classroom, immediately followed by a short practical, apply the theory then straight back to the classroom to reflect on practical results?

Yeah.

And how long were these sections?

That group it was about an hour each because of the technical problems of going from one building to another. We weren’t based in the workshop all of the time. Though sometimes finished up with the conclusions actually in the workshops, and do a bit of theory in there.

Were there other changes?

Yeah, because instead of giving them a theory which they had to understand as knowledge, it was a question of ‘what you would actually do if this happened’ - ‘what would you do with - how would you deal with that’ and instead of simply giving the answers ‘go and try it’, learn from by their own mistakes and use the equipment to diagnose rather than rely on me.

You encouraged autonomy and diagnostic skills?

That was the approach and philosophy and they’d learn by doing.

So we have more doing, autonomy, thinking.

Yeah. I facilitated where necessary.
M And how does that contrast with how you used to do it?

C With the same group, I covered modules one by dictation, the other group the experimental group had a lot of problem solving. I didn't use the workshops but gave them tasks to work in groups, then go away to their work placements for 4-5 days and come back with answers. Some practical tasks, some assignments.

M Theory and practice were quite separate? With your traditional model?

A Yes, its theory here followed by work experience. That's one of the problems (theory and practice not connected).

M So you tried to integrate theory and practice in your reflective learning?

A (Nods) Yeah. Integrate it.

M Did you add reflection to it?

A Yeah.

A So they go away, like, in theory, had a diagnosis problem on a car, they would have to find the vehicle, take the details on the job card of what they did, then discuss the outcome at college.

M How does this relate to the industry needs? As vehicle mechanics do they need diagnostic skills and work autonomously or do they in practice refer problems up the line? What is expected of them? You're encouraging diagnostic skills, is that what is needed of them at work?

A I believe so, yeah!

C In some cases the foreman checks with the diagnostics, but a lot of garages have dropped the foreman.

A And its quick fit.

C You just have a senior technician to sort himself out.

A This is the difference between training and education. I can train anyone to change a wheel. What we need is people who can go out and diagnose a problem and then fix it. Not just say 'Oh, we can't do it'.

A That's what I'm trying to get from the students.

M Craftsmen not fitters?
A Yeah, basically that's it.

M How did you measure if your action research was successful? The methods rather than research results.

C Both groups had three assignments marked as a percentage. Both groups had an end of year exam, so we have some results there. Your questionnaire.

M The FEASQ?

A Yes.

C There was a college questionnaire.

M The course experience questionnaire was it?

A Yeah.

C And just general comments from the students.

M Did you record your own observations?

A Yeah. I was just going to add to that apart from the things Chris has said. The only other two forms. I know with the Rover group you've got test results, which again were produced for the work and from my point of view we've got like a diary of observation of classroom behaviour.

M Did you get any information from other teachers or line managers, anyone else?

C No, unfortunately.

A I tried to get others involved, but to be honest they were all a bit busy and whatever.

M Good, perhaps we could go through some of those sources of data and talk about your results so far. Shall we start with your own observations.

A I believe it worked and was very positive. Just their attitude and the fact they wanted to go and work. Work on something they wanted to do, something with a result at the end of it. It was interesting to see them working in groups, you got natural leaders, leading others. It worked very well.

A Their attention level went up, they were keen to get on and do things.

M It improved their level of motivation?

A Absolutely. Yeah.
M What about from the teacher's point of view and classroom

A Brilliant. A few technical areas, you need support staff, workshops, equipment, tools. Getting all that together can be tricky, and the lessons ran out too quick. We just ran out of time (laughs).

M Is running out of time something new?

A Well if I was honest with you, at quarter past three, they would be saying things like “isn’t it time for a cup of tea?” and I've got them in the workshop at four and saying to 'em come on I've got to go, someone else is due in here. Would you agree with that?

C Yes.

A Because they’re actually doing something. They’re going “no, this is good” and wanting to stay in. That was them, that was from them.

M Is it fair to say you felt it was a more efficient use of teaching time?

A Yes. Yeah definitely.

C That’s right. I think so. But personally I found it worked very well with the mature students. I think you would have to be careful with other groups. Our control group haven’t got the self-discipline. Give them a task and they would slope off.

M What did the students think of it all? We covered your observations, what about student opinions?

A I think it is reflected in your questionnaire personally. Yeah, they enjoyed it more. I don’t know if that is because it was a change or whether they were learning more. That would be hard to ..........

M What did you get from the FEASQ?

A We got a mixture of results. Deep learning does seem to reinforce what we were trying to do.

M Your reflective group adopted a deep approach?

A Yeah. We had one problem, the other group. When we tried to look at the alpha scores for their deep learning, they got it wrong. But I believe they didn’t understand the questionnaire.

M So the control group was unreliable in terms of the control alpha scores for the questionnaire, and you’re arguing that the control group were not able to understand the deep approach questions.
A: Yes.

M: What about assessment results, exams and assignments?

A: Tell him about the exams.

C: On the exams on the experimental group (reflective group), out of twenty odd students, only two people failed. The rest of the marks were very good but with the control group everybody failed.

M: Oh dear.

C: A couple of other small problems might have helped cause it. But, with the assignment work, again the experimental group (reflective) with the assignment marks were certainly higher than the control group.

M: Did you have any assignment marks for the experimental group prior to the experiment?

A: Yeah. Because of the time scales I've got a set of figures for the good group, if you like, prior to their changing teaching styles. So I can compare the experimental group before and after. Yet to do that fully, but it looks encouraging.

M: You think one group has improved their grades as a result of reflective learning?

A: Yes.

M: So overall do you think RL has improved student learning?

A: Yes.

M: What do you see as the advantages and disadvantages of RL? The pros and cons?

A: I would say, disadvantages are the actual organisation of what you're trying to do. Keeping control of things like equipment, booking of rooms.

M: There's quite a lot of admin.

A: Yeah. Timetabling and things, and little things like students reflect and it is all very well me getting them to do written work in the workshop, but they get their books greasy and ...... it's only a little thing but that is the only disadvantage I can think of. The advantages obviously what the student learnt, their motivation. The results they got are encouraging.
Coming back to something we said earlier was um it works well with a mature group, but a less mature group, they haven't the self discipline.

But could, but then, could I argue that... when we did some work on it last year we used first years, they were 16 (years old), and their, as you know, their results are encouraging as well.

I am not sure I can remember.

We proved the theory, it was a long time ago, and that was with a group of 16 year olds doing a level one.

And did you do it the same way last year?

Yeah.

Yep. Two different subject areas but the same method.

They were youngsters?

Yeah, 16, straight from school. I am not trying to put you down (to C) but I'm saying.......

Yeah, that's fair, I know what you're saying. Yes. (nods in agreement).

Any other pros and cons?

No.

From the workshop point of view, it can be easy for people to be carried by others. You've always got keen people who want to get on and do things. Which can then allow others to stand aside. Whereas in the class that would be different.

Would you do it all again?

Yeah.

How would you improve it then, the method?

I would spend more time explaining to the students what was going on, it was so different to what they were used to. So we need to look at that. And just the physical constraints of organising workshops.

Did they mind you doing things differently (the students)?

Well I used a bit of reverse psychology. I said 'what do you think is the best way to learn how that works?' and they said 'let's have a look at it'. So I said we can't do that here we need to go to the workshops. I got them on my side to start with really.
M You made them feel they had some control over the learning process.
A Yeah. It is better to do that than to tell them what to do (laughter).
M You negotiated with them, was that a key to the success?
A Yes. Because about 2 weeks earlier we had that moderator, that BTEC moderator come round. He interviewed the class and one of the things that did come up in the report was the fact we are teaching technical things that they are not seeing in the classroom. This is what they said to the moderator.
M When was this, before the experiment?
A Yes. Christmas.
C Christmas. Yes.
A So it tied up a bit really.
M Your change coincided with what the moderator was after and what the students were demanding?
C+A Agree.
M Any other refinement for next year?
C Thinking about next year. This year we have been able to use classrooms and workshops. For me to do it next year I don't think I will be able to be in the workshops at all next year, the way the timetable is going to go. So I'm trying to think how I can use it in a classroom solely. I have got something you must think about as most of your teaching is classroom based? (to M).
M Yeah. Mind you the classroom is our workshop I suppose (laughter).
A Yeah (laughs).
M Have you any more thoughts on improvement (to A)?
A I think I've mentioned a few. Yeah! Subject area, resources.
M I have 3 models of learning ...... I was interested in your thoughts about the 3 models. Jarvis was the one you used.
A Yeah.
C Although the Kolb one is, looking at some of our students, theory, practice, experience, reflect on it. You know. Yeah.
A You have trouble with that - with the reflection. Because you teach them they do it, they have the experience, but when do you come back to this (reflection) because they could do that at work or .......... .

C Well they could Yeah they could.

A This looks quite good.

M Usher and Bryant.

A Yeah. Its simple.

C You think it a good idea that you can bounce back and forth, rather than follow a cycle?

A Umm (agreement), quite.

M How does it compare to this one (Jarvis)?

Long silence.

A Its a bit more - dare I say it a complicated issue of the same (as Jarvis).

M Which do you think most accurately reflects the way your students learn?

A This is good because they travel back and forth between areas (Jarvis). I think this is never the truth.

C (Agrees).

M If I asked you to put them in priority order which would it be ............... 1 - 3?

C Personally I would put the Jarvis one first, Usher and Bryant second and Kolb third,

A Yeah. I agree with that. Sorted.

M So why is Jarvis coming out top then?

C Because there's more opportunity to go ....

A Its more flexible isn't it (intervenes)?

C Yes.

M Good. Okay. Give me your overall summary opinion of your two years using RL.
As a short summary, students enjoy it, we appear to be getting better marks in assignments and exam marks.

It works.

It works, yeah.

From what we have seen. And its more enjoyable, for myself its less hassle, because they are enjoying it. But it does take a bit more organising - in fairness. You can't just go into a classroom and say we will do this today, you have got to plan it, have it all laid out in advance.

So it is less hassle once you're in the classroom (Pause). What do you mean by hassle?

It may not be the right word. They're learning by doing. Which is what it is all about.

Good classroom behaviour.

Much better, because they're interested all the time.

How did you find classroom behaviour in your control group (to C)?

They were more or less spoon fed and I still believe with that group it would have to be like that just to keep them sat down. The second you let them loose they would wander.

Chris has a good point, going back on what I have said for some people this may not work.

Do you think some of these ideas could work further across the department?

Certainly, yeah!

They've even built classrooms in the workshops. They've actually got a classroom built down the side with the machines and workshop next to it. The theory being that they can move between theory and practice more easily.

Was that linked to this research, a consequence?

No to be honest it was a financial thing. Saves a classroom. But it is ideal for it (RL).

Is it true to say that the traditional FE model would have been a 2-3 hour theory session in a classroom. Then they would have a practical for 2-3 hours?
M Maybe morning theory and an afternoon as practical. Whereas you are trying to switch back and to between theory and practice in short bursts. Short sharp input.

A Yes.

M Of theory. Followed by short sharp practice followed by a period of reflection, evaluation and conclusions.

C+A Yes.

M Good. Are there any other final comments on the process?

A I would like to see this taken across other departments, even other areas of our own department. We would see larger numbers and prove it has worked really.

C Yes.

M Is the sample size a problem with your own research?

A Not really. What we have done we have done fairly well. But the numbers, larger numbers the more accurate.

C For our own research we need data now but we can continue over the next 2-3 years and monitor the pattern.

M If you gave a presentation to your colleagues on how to do this, what would you recommend they do in their classrooms?

A Do what we have done.

M The key change is?

A Keep moving, get them involved, don't stand up and waffle on at them for 3 hours. Do a bit of this and a bit of that (points to aspects of the cycle).

M (Ends and thanks.)
Interview Schedule:
Both Interviewer and interviewee to have a copy of this schedule

Recorded Introduction:
- Date time
- Interviewee details: name, teaching subject, level and place.
- Thank you for your co-operation and valuable time
- Process:

With your permission I will be using this interview (and your action research) as part of my Ph.D. Research on reflective learning. The interview will be recorded on audio cassette tape.

The interview will focus on:
- How you put reflective learning into practice,
- What the outcomes for student learning and
- Your evaluation of the process.

Have you any questions before we start?

(Check record levels)

Questions
1. Could you please tell me a little about the classes where you have used RL in you teaching and course design:

You may wish to refer to:
- Subject, level,
- Age, sex, background.
• Experience, ability.
• Part-time or full-time.

2. I would like to know how you used reflective learning in your teaching and course design? What were the key RL elements in your teaching?
You may wish to refer to:
• Teaching and Learning Methods
• Assessments
• Tasks & Activities

3. How would you contrast RL classes with other approaches to teaching?

4. How have you evaluated the effectiveness of reflective learning?

5. What effect does RL have on student learning?
You may wish to refer to:
• Your own opinion & observations
• The students experience & opinion
• Opinion of others, line managers, team members

6. What other results came out of your research and evaluation of your RL classes?

7. Does reflective learning in your considered opinion improve student learning?

8. Pros and Cons:
What do you consider to be the:
- Advantages
- Disadvantages

of RL in teaching, learning and course design?

9. Will you be using RL in your future teaching, learning and course design?

- How could you improve the RL elements in your teaching and course design?

10. Which of the following RL models do you think is most likely to improve teaching and learning?

(Show Models)

- Could you put the models in order of preference

11. What is your overall opinion of the value of Reflective learning in teaching learning and course design?

Conclude

That ends the interview with ............... I would like to take this opportunity to thank you again for your co-operation and time.

Notes

Tape details:

Interviewee name:

Subject:

Level:

Comments:
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